The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE;

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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MR. JAMES H. CROFTS, STOCK AND SHARE BROKER AND MINING SHARE DEALER,
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50 Chontales, 9s. 9d.	35 Leadhills, 32s. 6d.	45 Richmond, £9¼.
40 Colorado, £1 17s. 6d.	30 Llanrwst.	40 Roman Grav., £6¼.
25 Devon Consols, 33s.	25 Morfa Du, 20s.	50 Rookhope, 5s.
20 East Van, 36s.	25 Pandora, 6s.	10 Tankerville, £2 7s. 6d.
50 Flagstaff.	50 Penstruthal, 2s. 6d.	

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RAILWAYS—SPECIAL BUSINESS.
FOREIGN BONDS—SPECIAL BUSINESS.

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JAMES H. CROFTS, 1, FINCH LANE, LONDON.
ESTABLISHED 1842.

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100 Chontales, 11s. 6d.	30 Gold Run, 5s. 6d.	70 Pestarena, 3s. 6d.
50 Chapel House, 40s. 6d.	50 Glenroy, 10s. 6d.	100 Penstruthal.
25 Colorado, 37s.	5 Great Laxey, £16.	40 Port Phillip, 10s. 9d.
5 Cape Copper.	25 Herodsfoot, £2.	15 Roman Grav., £6 11 3
3 Carn Brea, £32.	50 Hultafall.	20 Richmond, £9¾.
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100 Don Pedro, 19s. 3d.	50 Kapanga, 11s.	5 Tincroft, £9⅞.
40 Eberhardt, £3 8s. 9d	40 Leadhills, 36s. 6d.	20 Tankerville, 47s. 6d.
10 East Pool, £10¼.	70 Last Chance.	10 Van, £19⅝.
15 East Van, 39s.	5 Minera.	15 Wheal Peevor, £10¼.
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MINES.—Many good purchases may now be made, especially in Tin and Lead Shares, some of which are likely to have a considerable rise, and will pay well as an investment. Shares in several SOUND PROGRESSIVE MINES may also be secured now on favourable terms, and will probably double their present value within the next few months.
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RHYDALUN ... ... £10 to £11.

RHYDALUN.—The prospects of this Mine are UNSURPASSED by any in the celebrated Mold district. The returns of lead are now FIFTY TONS monthly from driving and sinking alone, leaving the reserves intact, and gained at a monthly cost of about £170. The reported important rise in the price of lead, if maintained, will probably add another £1000 a year to the profits.
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100 Bettwys-y-Coed.	40 Eberhardt, £3¾.	100 Parys Mount., 10s. 9d
100 Bodidris.	10 East Pool, £9¾.	35 Penhalls, 4s.
85 Cakemore.	35 East Van, 35s. 6d.	100 Penstruthal, 3s. 6d.
70 Chapel House, £2.	25 Grogwinion.	90 Pitangui.
100 Cambrian.	20 Gawton, 5s.	15 So. Frances, £9.
3 Carn Brea, £32.	100 Glyn, 12s.	10 Van, £19.
3 Dolcoath, £29.	20 Hornachos.	100 Tamar Silver-lead.
50 Devonport and Tiverton Brewery.	25 Herodsfoot, £2 16s. 9d	70 West Frances, £4¼.
	100 Last Chance, 11s. 6d.	35 Wheal Jane, 27s. 6d,
70 East Caradon, 2s.	125 Llanrwst.	30 Wheal Uny, 6s.
100 Don Pedro, 17s. 6d.	30 Marke Valley.	40 Wye Valley.

BUYERS or SELLERS of any of the above, or holders of any Stocks or Shares not readily marketable, will do well to apply to Mr. BUDGE.
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Chapel House, 42s.	Hultafall, 32s. 6d.	Rossa Grande.
Don Pedro, 18s. 9d.	Kapanga, 10s. 6d.	South Frances, £9¼.
East Van, 36s. 6d.	Last Chance, 8s. 9d.	Tankerville, 45s.
Eberhardt, £3½.	Leadhills, 35s.	United Mexican.
Flagstaff, 5s.	Pandora, 7s. 6d.	Van, 18¾.
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BANKERS: LONDON AND WESTMINSTER.

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Colorado.	Leadhills.	Richmond.
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Gold Run.	Pestarena.	Wye Valley.

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Cakemore	Gunnislake	South Caradon
Chontales	Herodsfoot	South Wheal Frances
Colorado	Hingston Down	Van
Don Pedro	Marke Valley	West Chiverton
East Caradon	Parys Mountain	Wheal Crebor
Eberhardt	Penstruthal	Wheal Peevor

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Glyn, 11s.	Lead Era.	Wh. Kitty (St. Agnes). 2s. 6d.
Herodsfoot.	Parys Mountain, 9s.	
Llandegla.	Pateley Bridge, 17s.	Wheal Uny, 2s. 6d.
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Investigations, Reports, and Valuations made of Coal, Iron, Slate, Pyrites, and other properties at home and abroad. Enquiries for Road and Railway Materials, Mining Plant, Pipes, Castings, &c. Plans, &c., of the most modern and economical mining appliances, fittings, and arrangements.
I have been long acquainted with the principal Coal and Ironworks in the North, with the Slate Quarries in North Wales, and for many years was Chief Engineer of the Tharsis Mines, Works, and Railway in Spain.

TO COAL MERCHANTS.

THE COMMISSIONERS OF IRISH LIGHTS ARE PREPARED to RECEIVE TENDERS for the SUPPLY of the UNDERMENTIONED QUANTITIES of LEDMAHAGOW, NERQUIS, or HEYWOOD CANNEL GAS COAL.
Also, for WHITEHAVEN SLACK, or HOUSE COAL DROSS, suitable for banking purposes, or "COKING COAL BREEZE."
A certificate of the coal, guaranteeing it to be from the mine quoted, to be delivered and weighed into the stores at the undermentioned Lighthouses, free of all charge, on or before the 1st day of May, 1879. Each Lighthouse to be provided with a separate Bill of Lading.

		Cannel.	Breeze.
Ft. John's Point Lighthouse, County Down	...Tons	22	23
Rockabill Lighthouse, Skerries, County Dublin		23	22
Howth Bailey do.	, Hill of Howth	44	29
Wicklow Head do.	, Wicklow	10	30
Hook Tower do.	, Hook Point, County Wexford	65	—
Minehead do.	, Ring Pier, Dungarvon Bay, County Waterford	15	34
Galley Head do.	, Clonakilty, County Cork	10	12

The lowest or any Tender will not necessarily be accepted.
Tenders to be delivered (through post, prepaid), at the Secretary's Office, on or before the 6th day of March, 1879, endorsed "Tender for Gas Coal."
Parties may tender for the supply of coal for one or more, or the whole, of these Lighthouses, but separate prices to be quoted for each.
Security will be required for the amount of tender, and the contractor shall deliver all the coals contracted for at the prices specified in his tender on the day above named. That if the contractor does not deliver the coals on or before that day the Commissioners of Irish Lights will be at liberty to declare the contract at an end, or to purchase and deliver sufficient coal to complete the contract, and the contractor and his securities shall pay for same.
By Order, W. LEES, Secretary.
Irish Lights Office, Dublin, 28th February, 1879.

NOTICE TO COAL CONTRACTORS.

THE COMMISSIONERS OF IRISH LIGHTS HEREBY GIVE NOTICE that they are PREPARED to RECEIVE TENDERS for SUPPLYING COAL to their different LIGHTHOUSES round the COAST of IRELAND for the year ending the 31st March, 1880.
The respective quantities to be supplied at each station can be ascertained on application to the undersigned, at this office.
It is optional to contractors to tender for supplying coal to one or more stations, but one tender for supplying the entire coast would be preferred.
The Commissioners do not bind themselves to accept the lowest or any tender.
Security will be required for the due performance of the contract.
Tenders will be received at this office up to noon, the 13th day of March, 1879, to be sent sealed through post, endorsed "Tender for Coal," and addressed to the Secretary. By Order, W. LEES, Secretary.
Irish Lights Office, Dublin, 28th February, 1879.

HULL TRAMWAYS.

THE DIRECTORS OF THE HULL STREET TRAMWAYS COMPANY THINK it only RIGHT to INTIMATE to the PUBLIC that NO TERMS have been made by the HULL AND HESSLE TRAMWAY COMPANY (Limited) with this company for the USE of their SYSTEM, and, therefore, that company has no means arranged for access to Hull, or any Parliamentary power to make a junction with the existing tramway system in Hull.
By Order, A. C. BANNISTER, Secretary.
Minerva Chambers, Hull, March 5, 1879.

TO MINING COMPANIES, &c.

WANTED, a SITUATION as WORKING ENGINEER, at home or abroad. Excellent references, &c.
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SILVER MINING IN NEW SOUTH WALES.

WANTED, TWO or THREE CLEVER PRACTICAL METALLURGISTS to JOIN the Proprietor of recently opened SILVER MINES in AUSTRALIA as PARTNERS. Must each have a small capital (which would be invested in silver saving appliances) as a guarantee of their respectability, and to enlist their best energies in developing the mines, which are very extensive and very rich. Present value of plant on the ground about £2000, and present produce of silver, with rather imperfect appliances, from 100 ozs. to 600 ozs. per diem. This produce might be increased fourfold with but a moderate outlay on Wheeler's pans, &c. The yield of silver, in fact, is only limited by the means adopted to secure it.
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Apply to F. E. YOUNG, Stock and Share Broker, 13, Queen-street, Exeter.

WANTED, PLANS and ESTIMATES of the MOST IMPROVED and PRACTICAL MACHINERY for the MANUFACTURE of TEA LEAD.
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MR. CHARLES THOMAS,
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MR. ALFRED THOMAS.
MINING AGENT, AND STOCK AND SHARE DEALER.
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Bankers: The Alliance Bank (Limited).

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Bankers: Metropolitan.

WILLIAM GABBOTT, STOCK AND SHARE DEALER,
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Bankers: The National Provincial Bank of England.

ANOTHER GREAT BARGAIN.—FOR SALE, FIFTY SHARES in the WEST CRAVEN MOOR LEAD MINE, at £2 10s.; and TWENTY-FIVE in the EAST CRAVEN MOOR LEAD MINE, at £4 12s. 6d. Holders must sell, wishing to be rid of them.
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FOR SALE, COMPLETE COPIES of the "MINING JOURNAL" FOR THE LAST EIGHTEEN YEARS, from 1861 to 1878, both years inclusive.
Apply, stating highest price, to Mrs. NANCARROW, Basset-road, Camborne, Cornwall.

FOR SALE, the WHOLE or PART:—

30 Gorsedd & Merllyn, £2½.	50 Lead Era.	50 Hultafall. £1¾.
100 Morfa Du, fully paid up, £1 2s. 6d.	100 Bettws-y-Coed.	5 Herodsfoot, £2.
	4 Rhydalun.	50 East Van, £2 2s.
	100 Tyn-y Fron.	150 Glyn, 12s. 6d.
	100 Parys Mountain.	

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N.B.—Information given as to market value and prospects of shares, and the mines which may be relied upon.

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Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES.—No. CVIII.*

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,
Mining Engineer, Wakefield.
(Formerly Student at the Royal Bergakademie, Clausthal).

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SECTION V.

The following arrangement is used for lowering the sludger into its place. Somewhat below the upper end of the sludger four vertical lengths of angle iron are bolted or riveted in the spaces left between the four flat vertical bars above mentioned. Like the latter, the four lengths of angle iron are placed so that they are at the ends of two diameters drawn across the sludger at right angles to each other. The vertical plates of angle iron carry two horizontal cross bars. These cross bars are held by means of a double fork attached to the end of a vertical rod, which terminates at its upper end in a hemispherical shaped button or head, which latter projects about 4 in. above the upper end of the sludger. The cross arms are attached to the double fork by means of a set of gibs and cotters.

The lowering of the sludger into the advance bore-hole is effected by means of a double hook attached to the end of a set of rigid rods. The two hooks, which are welded together at their upper ends, are bent in opposite directions at the bottom, so, however, that the inner surfaces of the hooks are in one line. When it is intended to lower the sludger the double hook is attached to one of the horizontal cross bars above mentioned, so that on raising the rods the hook catching beneath the cross bar holds the sludger suspended. The sludger is then lowered by screwing on additional rods, till the sludger comes to rest upon the top of the advanced bore shaft, when the rods are lowered still further, until the double hook is below the cross arm. On rotating the rods, and with them the hook, the latter can be raised without catching against the cross bar, and the rods and hook can then be raised to the surface, leaving the sludger suspended from the mouth of the bore hole.

After the sludger has been lowered into position the large borer is attached to the rods and lowered, and the raising and falling of the cutter commences. At Gelsenkirchen, where the full diameter of the shaft was bored in one operation, and a free falling arrangement used, the striking weight amounted to 19 tons, the amount of fall being from 24 to 30 in. Only six to eight blows are struck per minute, and the gradual rotation of the borer is effected only between every second or third blow. As we have before mentioned, only a portion of the debris formed will find its way of itself into the sludger, the remainder must be brought into the bore-hole by means of the scraper. The scraper serves, as its name indicates, to scrape or drag the debris left in the bottom of the shaft into the sludger; and at the same time it is so arranged as to raise the already filled sludger, when the scraper is drawn to the surface. The object of the arrangement we are now about to describe is to give a backward and forward motion between the centre of the shaft, or rather the circumference of the bore hole, and the sides of the enlarged shaft, for which purpose only the upward and downward motion of the shaft rods is available. The two blades of the scraper are rectangular in form, about 2 ft. long and 8 in. in height, being toothed on the lower edge. The blades are attached to the ends of the long arms of two bent (nearly at right angles) levers; these lower longer arms being forked, so as to form a better hold for the scrapers. The blades have imparted to them a to and fro motion parallel to the bottom of the shaft. At the end of each backward motion towards the sides of the shaft, and before the commencement of the forward motion to the advanced bore hole, the apparatus is rotated slightly, so that after a half rotation of the apparatus every portion of the bottom of the shaft has been scraped over by the two blades; the one blade having scraped over the one half, and the other blade over the other half. The bent levers are each moveable about a pin passing through the levers at the point where the bend of the levers occurs, and at the junction of the long arm with the short one. The two pins are carried at the ends of a short cross piece, fixed to a long vertical rod, which screws on to the last of the shaft rods. The ends of the short arms of the two bent levers are connected with two links by means of pins, about which the arms and the links are moved independently. The upper ends of these links are connected to a short cross piece by means of two loose pins. This short cross piece is moveable on the same long vertical rod to which the first cross piece is rigidly attached. Passing through the loose cross piece, or rather attached to it at right angles, are two short axles, one on either side, which carry suspended from their ends two long square rods, terminating in round (somewhat thicker) rods. These two bars, or rods, are fastened tight to a clamp, composed of oak blocks, held in an iron frame, which are pressed by means of two bent springs; the pressure can be increased by means of a bearing screw passing through the iron frame, and tightening against the springs. Attached to this clamp are two cast-iron plates, which support a sliding or slot piece. In this slot piece the lower end of the long vertical rod above mentioned slides up and down; a couple of slide plates, or slide blocks, being attached to the lower end of the long vertical rod, which thus guides it vertically in the slot piece. Nearer the upper end of the slot piece the latter is enlarged, and has two projections attached to this enlargement, which catching against the upper ends of the slide blocks arrest the independent motion of the latter, any further raising of the long vertical rod, then raising also the slot piece with it. The lower end of the slot piece is formed nearly spherical in shape, and is embraced by four hooks, with correspondingly formed socket surfaces on the inside, constituting a sort of ball and socket joint. Four springs attached to the upper ends of these hooks or arms, and bearing against the round (not spherical) portion of the lower end of the slot piece, force the upper ends of these arms apart, and the lower ends (which form the hooks) together, thus forming a sort of gripping apparatus.

When the boring apparatus has been raised out of the shaft and placed on one side, the scraping instrument we have just described is attached to the rods, and lowered into the shaft. When the instrument is being thus lowered the long vertical rod will occupy its highest position with regard to the rest of the apparatus; the slide blocks at the lower end of this rod will be immediately beneath the enlargement of the slot piece, which will be thus supported. The bent levers and links will occupy such a position that the long arms hang nearly vertical, and the two cross pieces (attached to the links and short arms) are nearest each other. When the slot piece reaches the bottom of the shaft the grappling apparatus (just described) at the lower end of the slot piece will come to rest on the hemispherical head, or button, at the end of the vertical bar projecting above and attached to the sludger. The weight of the slot piece, however, will be sufficient to cause the lower ends of the hooks of the grappling apparatus (which, as we have just mentioned, are kept pressed together by means of springs) to open until they have gripped hold of the above mentioned hemispherical head, or nut. The sludger is now attached to the slot piece, and consequently with the scraping apparatus, so that when the latter is raised to the surface the sludger is raised with it. This arrangement serves at the same time to hold the scraping apparatus in the middle of the shaft, since the sludger, which hangs in the advanced bore hole, cannot change its position. The ball and socket arrangement of the gripping apparatus allows of the scraper being rotated independently. As the apparatus—or rather the shaft rods—still continue to descend, the long vertical rods carrying the fixed cross with it, while the moveable cross piece being held by the weight of the slot piece, &c., retains approximately the same position; since, however, the two cross pieces, which form the corners of the parallelogram formed by the short arms of the bent levers and the links, move further apart, the short arms are raised into a more vertical position, the lower ends of the long arms move at the same time further apart towards the sides of the enlarged shaft. When the rods have reached their lowest position they are again raised, reversing the motion of the scraper blades, which are thus drawn towards the mouth of the sludger, and during this motion the blades, &c., resting with their whole weight on the bottom of the boring shaft, scrape the debris before them into the mouth of the sludger. The weight of the sludger, falling piece, &c., suffices to resist the tendency of the raising of the rods to raise the bent levers and scraper blades above the bottom of the shaft. Immediately before the raising of the rods the apparatus is slightly rotated. This raising, partial rotation, and lowering of the rods is repeated until the whole surface of the bottom of the shaft has been scraped in this manner.

After the bottom of the shaft has been cleared by scraping the whole of the debris into the sludger the scraper is raised, and along with it the sludger, which is attached to it.

When the rods and apparatus have been raised above the scaffolding (forming, as described, two hinged doors) in the shaft, so that the doors may be allowed to fall back into their horizontal position, closing the shaft, the rods are again lowered so far that the upper end of the sludger projects from 2 to 3 ft. above the shaft scaffolding, the sludger is embraced by a large clamp, composed of two thick balks of wood, tightened up by two strong iron bolts. By this means the sludger can be suspended independently from the shaft scaffold. The sludger is then detached from the scraper, so that the latter can now be raised alone to the proper height, and suspended from an iron strap fixed in the boring tower. The loose end of the winding rope is then lowered out so much that it can be attached to the sludger. A short iron rod, however, is usually first screwed on to the double hook arrangement we have previously described, by means of which the sludger is laid hold of. After unclamping the balks surrounding the sludger the latter is raised to a sufficient height in the bore tower to be attached to and suspended from one of the two tram carriages before mentioned, by means of which it is run out of the bore house, and over a tip wagon. The bolts holding the folding doors at the bottom of the sludger are drawn back, and the debris falls out into the tip wagon, which is then run along the trams laid on the pit bank, and the debris tipped out on to the dirt heap, or bank.

M. Chaudron, the Belgian mining engineer, effects the sludging by attaching the sludger to rigid rods, and considers the suspending of the sludger from the mouth of the bore hole as extremely objectionable, increasing the liability to breakages and stoppages. The use of the scraping instrument we have just described Kind considers as likewise open to the grave objection that it is liable to breakages and derangement.

In the shaft sinking at Gelsenkirchen, where the shaft was bored out in one operation to the full diameter, the sludge was raised from the bottom of the shaft with a different apparatus. The sludge pump, or sludge tank, consists of a long cistern about 6 feet high and 6 feet broad, the ends of the cistern being curved to suit the curvature of the shaft. The bottom of the tank, which is formed like the sides of sheet-iron, is perforated with from 18 to 27 circular holes about 12 inches in diameter, each being covered on the upper side by a saucer-shaped iron valve. Each valve is attached to a long (about 6 feet) rod, which passes loosely through two bearings or holes in cross bars rivetted at the ends to the sides of the tank. Three strong semi-circular iron straps are rivetted at the ends to the upper edge of the sides of the tank, and are all bolted at the crown of the arch to a long oak beam 6 inches by 9 inches. A short stiff rod, the lower end of which passes through the oak beam and hoops, serves as a bolt connecting the straps with the beam. The top end of this rod has a short screw by means of which it—and, therefore, the tank—can be suspended from the shaft rods. Two tie rods pass from this thick rod to the ends of the oak beam, being secured by the same bolt which fastens the iron hoops to the oak beam. When the tank has been lowered to the bottom of the shaft it is alternately raised and lowered about 18 inches; the water during the down stroke pressing against the underside of the valves forces them open, and carries with it the slime and debris into the tank. The tank is thus alternately raised and lowered for about 15 to 20 minutes, during which time it is also gradually rotated. The motion is then discontinued for another 15 minutes in order to allow of the settling of the slime; the tank is then raised to the surface and emptied. It order to lessen the liability to the tank being raised empty, owing to a larger piece of stone, &c., sticking beneath and keeping open one of the valves, the tank is usually divided into three compartments. The sludger or tank requires to be lowered a second time in order to raise all the debris.

The grappling instruments used in these operations differ from those we have previously described as used for ordinary prospecting operations only as regards their size, and their use is much easier in these shaft boring operations, since there is always plenty of room for handling the instruments. After the boring of the shaft the lining must be introduced, which must naturally be of a water-tight character. The lining of the shaft was effected by Herr Kind both with wood and iron.

The shaft at Styringen was lined with wood in the following manner by Herr Kind. A cylinder of cast-iron, the exterior diameter of which is from 16 to 20 in. less than the diameter of the excavated shaft, is provided with flanges at the lower end by means of which it can be bolted to a strong oak crib. The outside of this cylinder is filled with hydraulic mortar, which is held in an annular space formed by fastening long thin staves to the outside periphery of the oaken cribs, the staves reaching to the same height as the cast-iron cylinder. The joints of the staves are made tight by means of strips of linen nailed to the staves; and the top of the annular space is sometimes loosely covered by means of linen. The shaft lining is composed of staves of oak 9 in. square, fastened by means of iron straps about 4 in. broad and ½ in. thick placed at distances of 38 in. from each other. The horizontal joints were made by accurately planing the ends of each ring of staves, the joint being covered on the outside by a sheet-iron strap 12 in. broad. The lowest of the oak rings is about 12 in. to 18 in. higher than the cast-iron ring, but the inside of the lower portion of this ring (to the same height as the cast-iron ring) is enlarged in internal diameter, so as to fit the outside diameter of the cast-iron ring. This enlargement is made by planing the lower parts of the staves on one side for the height of the cast-iron ring, so that they are only about 6 in. to 7 in. thick instead of 9 in. The upper wooden rings are from 6 ft. to 9 ft. in height, and 12 ft. in internal diameter, the lining consisted of 44 such rings. The cast-iron ring or cylinder is suspended from the lowest of the wooden rings by means of long tie-rods or bolts passing beneath the oaken bearing crib. Just below the enlargement of the internal diameter of the lowest wooden ring the latter is closed by a strong floor or scaffold formed of two sets of square wooden beams laid close together, covering the whole area of the cylinder, the beams of one set being placed at right angles to those of the other set. In the centre of this flooring a small hole is bored, which is covered on the upper side by a short hollow cylinder, in which a thick metal piston fits, the rod of which is attached to the shaft rods. In this piston are two vertical openings, which are covered on the upper side by two valves opening upwards, and which correspond exactly with two similar openings in the cover of the cylinder. When the shaft has pierced through the water-bearing strata and reached water-tight rock, the preparations for sinking the lining are commenced.

The lowest (cast-iron) cylinder is raised and suspended over the mouth of the shaft, the hydraulic mortar is poured into the annular space between the cylinder and the wooden staves or planks. The second cylinder—*i.e.*, the lowest of the connected set of (timber) lining rings— is raised and placed close over the first, and the two are then connected by means of long iron rods or anchors. In order to prevent these rods from slipping off, since the ends are merely bent at right angles, concentric rings are introduced, which fitting all round close against the rods prevent their movement in any direction. When the two cylinders are thus connected together they are raised and suspended over the mouth of the shaft, and then lowered a short distance into the shaft until the upper end of the cylinder is somewhat above the mouth of the shaft. A third ring is then placed upon and connected with the last, and the lining again lowered till the upper edge of this third cylinder is likewise somewhat above the edge of the shaft, when the next ring is attached, and so on. In this manner the lowering of the lining is continued until the solid water-tight rock is reached.

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath Dr Von Groddeck, Director of the Royal Bergakademie, Clausthal, The Harz, North Germany.

GEOLOGICAL SOCIETY OF LONDON.

Feb. 21—HENRY CLIFTON SORBY, F.R.S. (President), in the chair.

George Bond, Peckham Birkbeck School; Francis Gaskell, B.A., Burlington House, Spring Grove, Isleworth; and George Henry Hollingworth, Hollinwood, Oldham, were elected Fellows of the Society.——William Adamson Barrow, Assoc. Inst. C.E., Althorpe House, Queen's-road, Richmond Hill, Surrey; Gregory Dent, Ousegate, Selby; Julian John Leverson, Lieutenant R.E., Staff College, Camberley, Surrey; and Rear-Admiral Francisco Sangro Tremlett, R.N., Bellevue, Tunbridge Wells, were proposed as Fellows of the Society.——Rev. Edward Augustus Davies, Shady Tree House, Middleton, near Manchester; Lazarus Fletcher, B.A., British Museum; Arthur Samuel Hamond, M.Inst.C.E., Storey's Gate, and New-street, Birmingham; William J. Pope, Brookhill Park, Plumstead; and George W. Slatter, F.C.S., Arundel-street, Prince's-road, Liverpool, will be balloted for as Fellows of the Society.

A block of coal from the New Douglas Mine, Nanaimo, Vancouver Island, was presented to the Museum by the Vancouver Coal Mining and Land Company. The following communications were read:—

1.—A copy of a letter from the late Acting Governor of the Falkland Islands, relating to the overflow of a peat-bog near Port Stanley, in East Falkland: communicated by H.M. Secretary of State for the Colonies.

2.—"Note on Poikilopleuron Bucklandi, of Eudes Deslongchamps (père), identifying it with Megalosaurus Bucklandi," by J. W. Hulke, F.R.S., F.G.S.

2.—Note on a Femur and Humerus of a small Mammal from the Stonesfield Slate," by Prof. H. G. Seeley, F.L.S., F.G.S., Professor of Geography in King's College, London.

3.—"A Review of the British Carboniferous Fenestellidæ," by G. W. Shrubsole, F.G.S. In this paper the author gave the results of his investigation of the Fenestellidæ from the upper beds of the Carboniferous Limestone on the Halkin Mountain, in Flintshire. He stated that the described carboniferous species of Fenestella now number twenty-four, of which he has been able to examine nineteen, and finds that they have been needlessly multiplied, owing especially to the neglect on the part of describers to allow for difference in the structure at various stages of growth and in different parts of the polyzoarium. His investigation led him to refer the forms known to him to only five species—Fenestella plebeia, McCoy, F. crassa, McCoy, F. polyporata, Phill., F. nodulosa, Phill, and F. membranacea, Phill.—Mr. DE RANCE bore witness to the great industry of the author in working out this question, and to the value and excellence of preservation of the specimens derived from the Halkin Mountain quarries.

The next ordinary meeting of the Society will be held on March 12, when the following communications will be read:—1. "On Conodonts from the Chazy and Cincinnati groups of the Cambro-Silurian, and from the Hamilton and Genesee Shale divisions of the Devonian, in Canada and the United States," by G. Jennings Hinde, F.G.S.—2. "On Annelid Jaws from the Cambro-Silurian, Silurian, and Devonian Formations in Canada, and from the Lower Carboniferous in Scotland," by G. Jennings Hinde, F.G.S.—3. "The Gold-leads of Nova Scotia," by H. S. Poole, M.A., F.G.S.—4. "On Perlitic and Sphærulitic Structures in the Lavas of the Glyder Fawr, North Wales," by Frank Rutley, F.G.S.

THE GEOLOGY OF COAL.

Professor GREEN, of the Yorkshire College of Science, and many years connected with the Geological Society of Great Britain, a few days since delivered an able and interesting lecture on the "Geology of Coal" at Barnsley, to an appreciative audience. It is well known that two theories have been advanced with respect to the formation of coal, one assuming its origin to be the drift-wood carried down by streams and imbedded in estuaries, and the other that the vegetable materials grew on the spot where they are now found in the form of coal. The latter is entirely in harmony with the phenomena found in connection with the coal measures, the vegetable origin of which we may say was recognised so far back as 1785 by HUTTON, as given in his "Theory of the Earth." Professor GREEN commenced by stating that England had changed very much during the comparatively short period that was covered by human history. Two thousand years ago this country was a wild trackless waste, but now everything was altered, for they had highly cultivated lands, means of transport by railways, rivers, sea, and canal. These had materially helped in bringing the country to its present position—one of the most densely populated spots on the earth, and one of the busiest to be found in the world. During the earlier period of the world's existence sea and land had changed places over and over again, and this country had participated in those changes. That period, however, was so immensely removed that no human pen had recorded what the country was then like—yet records had been given them as accurate as any human chronicle could have furnished. In the ancient cities long since gone to decay the ruins of the houses, domes, and monuments, still remained, and were preserved, and learned men had set to work to find out what kind of people had inhabited those cities, and their manners and customs. Now, from time almost immemorial men had been engaged in almost similar work. But they must not suppose that the whole of the earth was of the same age, or that the rocks were as they are now found, for many of the latter contained the remains of great animals of the sea showing their connection. But there was one special group of rocks to which he would draw attention, and it consisted of sandstone, shales, limestone, and coal. They were so formed that they needed but little description. Shales were nothing in the world but hardened mud. Take a piece of it, and let it lie in the garden, or put it into a basin of water and stir it up well, when it would soon settle down into mud. Were they to go into a quarry or any place where sandstone was kept they would find it was divided into pieces or lumps, and these layers would range from 15 to 20 ft. in thickness, one above the other, like so many volumes of books one on top of the other. This was known as stratification, and the beds as stratified. Let them take a small pond or lake into which rivers or streams emptied themselves. The water took down sand and mud, which sank to the bottom, and in the dry weather it settled. The layer was thus hardened, and when the next layer came a distinction was marked between the two. It was, therefore, evident that shales and sandstones were formed in that way. Limestone rocks were composed of carbonic acid and lime. Many limestones were extremely hard solid rocks, some of which could be as easily dissolved by water as sugar or salt, not by pure water, however, but by water that held carbonic acid on its surface, and of this they got very inconvenient proofs in the state of their tea kettles. Coal lay amongst these shales and sandstone, and if they were to go into a colliery, or any place where coal was stored and broke it they would find that it gave way in pieces cubical in shape. It would give way in three directions, two of the directions being at right angles to the bedding of the shales and sandstone.

Coal was principally composed of mineralised vegetables, and Dr. DAWSON, who had minutely examined coal at home and in Nova Scotia, came to the conclusion that a greater portion of the latter was composed of the bark of the sigillaria. He did not say that the whole of the coal was so formed, for in some cases he found traces of plants. He divided the coal into three parts—mineral charcoal, the sigillaria bark, and the leaves, twigs, and stems of herbaceous plants. A very large portion of our English coals was made up of parts of plants different from those of the Nova Scotia coal. The well-known lepidodendron, which held a large number of minute bodies of spores, was related to the club moss, which grows in the marshy portions of the country, and which also produced spores; and here it may be said that at the present time there are no living representatives of the sigillaria and lepidodendron, the presumption being that the climate where they existed was not of an equatorial character, but warm and moist, and never extreme, something like that of New Zealand. With respect to the spores of the club moss—which had been shown by BROGNIART to be a representative of the lepidodendron—Prof. GREEN produced a small bottle containing spores, and on applying a lighted match to it the contents exploded in a similar manner to gunpowder, without any

report whatever. Stuff like that, the Professor remarked, was evidently the material well adapted for transformation into good coal, and no doubt did so. If they obtained a slice of such coal they would find a number of ringed patches of a yellow colour, and if it was cut at right angles to the top and bottom of the coal they would see a number of flattened rings, showing the progressive formation. Coal, then, may be said to be principally composed of the fruit of the lepidodrendon, there being found in it myriads of minute spores, whilst the sigillari, which has contributed more than any other to the production of coal, is a member of the family of the lepidodrendon.

The club-moss, too, had a cloud of spores in a single spike, that one would not expect from its tiny size and appearance, yet it took its part in the formation of coal, although they might think that the supply of spores would soon be exhausted. The lepidodendron was just the opposite; it had been a forest tree growing to a height of nearly 100 ft. (one specimen from the Jarrow Coal Mine was 40 ft. in length and 13 ft. in diameter near the base). Let them, continued the professor, imagine forests and forests of these trees, and they might then understand that the supply during the period before coal was found was almost inexhaustible. There were two points which were peculiarly characteristic of good coal. First its purity, and the absence of anything that could not have had vegetable origin. If good coal was burned there would be a little ash left, which in all probability was nothing more than the ash of the original wood. Then came its extraordinary thickness in some places, as, for instance, some of the coal in Yorkshire. There was the Silkstone, which covered a superficial area of hundreds of miles; it was evident it could not have been found in the same way as layers of sandstone. The deposit on which it was formed was not vegetable matter but mud; and suppose they had a vast swampy piece of ground covered with vegetation, each plant as it died would form a layer of bad vegetable matter. Let this go on for years—probably for centuries—and there would be no limit whatever to the vegetable matter accumulated. There would then be nothing whatever to introduce any improper mixtures in the shape of sand or clay into the matter so formed, and so the coal was formed. In conclusion, Prof. GREEN alluded to the Cannel coal, principally found in the Wigan district and some parts of North Wales, which he considered was formerly the plants brought down the rivers into the ponds or lakes, and ultimately formed a deposit after the water had been absorbed. A cordial vote of thanks was accorded to Mr. GREEN for his interesting and able lecture.

MINE PITS AND HAULING MACHINERY.

"The New Pits and Hauling Machinery for the San Domingo Mines in Portugal" formed the subject of an exhaustive and interesting paper read before the Society of Engineers on Monday evening by Mr. Joseph Bernays, vice-president. The San Domingo Iron Pyrites Mines, one of a group of three properties whence the principal supply of ore shipped from the southern Spanish peninsula to this country, is situated on the Chauza, a tributary of the Guadiana, about 12 miles from Pomarao. The other two properties are the Rio Tinto and the Tharsis Mines, both in Spain. A few hundred tons of ore were broken, and an old Roman adit and shafts were worked by a Spanish exploring company 20 years ago, but nothing of importance was done until the property came into the hands of Mr. James Mason (Baron Pomarao), who, assisted by Mr. F. T. Barry, his London representative, opened out the mines with energy, constructed loading stages at Pomarao, and a road, and subsequently a railroad from the mines to the port. In 1872, when the author first become acquainted with the mines, the ore was raised to the surface of the ground through three tunnels, one of which, leading to the upper levels, was worked by locomotives direct, the others by means of fixed hauling engines and wire ropes. As the trade increased and the quality of the ore became better known, however, it was found that it would be desirable to attack a still lower level of the ore, and to have a separate outlet for the same, with connections, if necessary, to the other levels. The question then arose, and was discussed at some length, as to the best method for accomplishing that object. Various methods were submitted, but that recommended by the author was to sink vertical shafts outside of the principal mass down to the deepest level, with suitable landings at any of the higher levels with which it might be desirable to connect the system. Cages and winding engines to be used similar to the plan generally adopted, the ascending and descending cages balancing each other.

The most notable peculiarity in the arrangement of this hauling machinery, besides the return to spur gearing, will, probably, be found in the construction of the drums themselves. These had to be arranged with a view to allow of the easy and quick change of working lengths of the ropes, for the purpose of raising ore from several galleries, a change which might have to be made several times in a day. Each separate level containing only a few working galleries, they are not sufficient for supplying a proper number of filled trucks to keep the engines fairly at work the whole day; but by allowing the loaded wagons to slightly accumulate in each level during part of the time the engines can raise alternately from whichever level the output is greatest, and thus keep all properly going. If, for instance, the men are at work in three levels (say), at 70 yards, 100 and 120 yards from the brace, and they start first by hauling up all the loaded wagons from the 70 yard level, this will give the men at the 100 and 120 yards time to push their loaded wagons up to the shaft, and whilst these are being raised in rotation the men at the 70 yard level fill their trucks in readiness for the next day's hauling. Thus, with one set of hoisting apparatus the whole of the levels connected with the shafts can be properly served, thus saving cost of a second, and perhaps a third, set of hauling machinery and shafts.

The *modus operandi* for changing from one level to another is as follows:—Let it be supposed that work has just been finished at the 70 yard level, and it is desired to start hauling from the 100 yard level. The cage which is suspended from the fixed drum will be placed and held upon the catches at the upper brace of the shaft; the other cage, which is suspended from the loose drum, will then be down at the 70 yard level, the catches on which landing are pulled out of the way and locked in the "clear" position." The attendants now separate the two brakes from each other, tightening up each independently. They then unfasten and throw back the two iron clamps which secure the clutch to the loose drum, and draw the clutch out of gear. They then gradually slacken the brake on the loose drum, and the cage suspended therefrom will descend slowly until it reaches the catches on the landing of the 100 yard level, where its motion is arrested. The clutch is then pushed into gear, and the 12 pins quickly find a bearing, thus adjusting the position of the cage within the twelfth part of the circumference of the drum, the utmost difference being within 1½ ft. of the required length. After securing the clutch by means of the two clamps, and re-connecting the two brakes for working simultaneously, the engines are ready for hauling from the new level, and the whole operation of adjusting to that level need not take more than 10 minutes to accomplish. To return to a shallower level the reverse action takes place. The cage resting on the top catches being that suspended from the loose drum, whereas the bottom cage is raised to the next required level by allowing the engines to move round gently with the fixed drum, until the cage has risen the proper height.

APPARATUS FOR SCREENING COAL.—By the use of the improvements invented by Mr. WILLIAM SPEDDING, of Chorley, Lancashire, the coals when in lumps or broken are more easily sorted, selected, or separated into large and small pieces, and dust or minute particles, the pieces are more easily cleaned, there is less breakage of the pieces into still smaller pieces, and consequently less waste, and there is less height in head gearing requisite in elevating such substances for delivery and removal. The construction of this screener and cleaner consists of a series of parallel bars or plates affixed crosswise to two or more continuous chain or belts, made to travel horizontally by means of revolving cylinders or wheels. The bars may be flat, or convex, or angular, and are placed at regular distances apart so as to allow of refuse, dust, minute particles, and small pieces passing between them into a hopper or shoot placed underneath, and from thence on to a sieve or screen through which the result, dust, and minute particles pass into a receptacle, the small pieces being delivered over the end of such sieve or screen into another receptacle placed for the purpose. At the point of reception there is an ordinary shoot through which the unscreened and uncleaned substances pass on to the bars or plates affixed to the travelling chains or belts. And at the point of delivery there is an ordinary shoot through which the larger pieces pass into a receptacle. As the substances are carried along on the bars or plates affixed to the travelling chains or belts, useless and waste pieces can be sorted and removed therefrom, leaving only the larger and better pieces, or such as are pure and saleable, to be collected and delivered. To prevent the substances from falling off the sides of the chains or belts, such sides may be protected by boards or plates slightly elevated above the bars or plates.

THE COAL TRADE.

Mr. J. R. Scott, the Registrar of the London Coal Market, has published the following statistics of imports and exports of coals into and from the port and district of London by sea, railway, and canal during February, 1879:—

IMPORTS.

By sea.	Ships.	Tons.	By Railway and Canal.	Tons	c.
Newcastle	227	201,215	London & North-Western.	137,724	8
Seaham	27	15,688	Great Northern	103,945	0
Sunderland	125	98,805	Great Western	104,328	0
Middlesborough	4	635	Midland	185,592	0
Hartlepool	72	28,261	Great Eastern	58,459	15
Scotch	18	9,320	South-Western	7,768	8
Welsh	5	1,765	Lond., Chatham, & Dover.	1,573	0
Yorkshire	24	1,508	South-Eastern	1,491	12
Small coal	7	2,138	Grand Junction Canal	211	10
Cinders	6	274			
Total	513	357,411	Total	601,093	13
Imports—Feb., 1878	467	299,406	Imports during Feb., 1878	472,469	0

Comparative Statement, 1878 *and* 1879.

By Sea.	Ships.	Tons.	By Railway and Canal.	Tons.	c.
Jan. 1 to Feb. 28, 1879	977	693,907	Jan. 1 to Feb. 28, 1879	1,147,823	19
Jan. 1 to Feb. 28, 1878	975	632,518	Jan. 1 to Feb. 28, 1878	973,712	3
Increase—1879	2	61,389	Increase—1879	174,111	16

EXPORTS.

Railway-borne coal passing *in transitu* through district	Tons	97,717
Sea-borne coal exported to British possessions, or to foreign parts, or to the coast	Tons	37,461
Ditto, sent beyond limits by railway		11,484
Ditto, by canal and inland navigation		1,894 = 50,839
Railway-borne coal exported to British possessions, or to foreign parts, or the coast		25,880
Ditto, by rail beyond district		30
Ditto, by canal and inland navigation		309 = 26,219
Sea-borne coal brought into port and exported in same ships		345
Total quantity of coal conveyed beyond limits of coal duty district during February, 1879		176,120
Ditto, February, 1878		184,904

Comparative Statement, 1878 *and* 1879.

Total distribution of coal from Jan. 1 to Feb. 28, 1879	289,837
Ditto, Jan. 1 to Feb. 28, 1878	379,687
Increase in the present year	10,150

General Statement, 1878-1879.

Increase in coals imported by railway	174,111
Increase in coals imported by sea	61,389 = 235,500
Less increase in coals exported	10,150
Total increase in trade within London district during present year.	225,350

THE COPPER TRADE.

Stocks in Europe:—		Tons.
Chilliores and regulus, Liverpool & Swansea (equal to fine).		4,135
Chili bars in Liverpool		21,048
Ditto Swansea		1,617
Foreign copper (chiefly Australian) in London		5,910
Ditto ditto landing		632
English copper in London		50
Chili bars and ingots and Barilla in Havre		5,851
Other copper in Havre		300 = 39,543
Afloat and chartered from Chili to Europe (advised by mail):—		
Ores and regulus (equal to fine)		2,850
Bars and ingots		6,023 = 8,873
Afloat from Australia (advised by mail):—		
Fine copper		1,833
Afloat and chartered from Chili to Europe (advised by cable):—		
Fine copper		4,600
Total		Tons 54,849

Price of bars, 54*l*. 15s.; Wallaroo, 63*l*. 15s.; English tough, 60*l*.

Leadenhall-street, March 1. HENRY R. MERTON AND CO.

Chili copper charters for the first fortnight of this month were 2300 tons fine, consisting of 800 tons bars and 300 tons ore and regulus for England, and 1200 tons bars for the Continent. Imports of Chili copper during the past fortnight, 377 tons fine; deliver during ditto, 1153 tons fine. Quotations:—

	Feb. 28, 1879.	Feb. 28, 1878.	Feb. 28, 1877.
Chili bars	55*l*. to 55*l*. 10s.	65*l*. 10s. to 66*l*. 15s.	71*l*. 10s. to 72*l*.
ingots	61*l*.	72*l*.	78*l*.
ore & regulus	10s. to 10s. 6d.	12s. 9d. to 13s.	14s. 3d. to 14s. 6d.
Coro Coro barilla	12s.	14s. 6d.	15s. 9d.

Arrivals at Liverpool during the fortnight of West Coast, S.A., produce:—Alpha, from Coquimbo and Valparaiso, 325 tons bars; Sarah Anderson, from Valparaiso, 52 tons bars.—At Swansea: *Nil*. Stocks of copper (Chilian and Bolivian) in first and second hands likely to be available, we estimate at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	40	1422	21,048	—	—
Swansea	1447	7109	1,617	—	—
Total	1487	8531	22,665	—	—

Representing about 26,800 tons fine copper, against 27,576 tons Feb. 14; 17,418 tons Feb. 28, 1878; 12,980 tons Feb. 28, 1877; 11,956 tons Feb. 28, 1876. Stock of copper contained in other foreign ore and Spanish precipitate, 1973 tons fine. Stock of Chili copper in Havre, 4562 tons fine, against 8860 tons Feb. 28, 1878; stock of Coro Coro barilla in Havre, 1900 tons fine, against 1400 tons Feb. 28, 1878; stock of Chili copper afloat and chartered for to date, 13,400 tons fine, against 10,900 tons Feb. 28, 1878; stock of foreign copper in London, chiefly Australian, 6592 tons fine against 58 0 tons Feb. 28, 1878. HARRINGTON, HORAN, AND CO.

Liverpool, February 28.

The stocks of Chili copper produce remaining unsold at Swansea on Feb. 1 were—Ore, 1447 tons; regulus, 7109 tons; and copper, 2051 tons. The arrival—657 tons ore and 815 tons regulus have been privately sold, as have 434 tons copper; consequently the stocks on March 1 were—Ore: Chili, 1447 tons; Cape, 835; Betts Cove, 1492; Spanish, 369; Portuguese, 452; Australian, 50—4845 tons; regulus: Chili, 7109; Betts Cove, 350—7439 tons; and copper: Chili, 1617 tons. These totals represent about 5000 tons fine copper. There have been two sales of Cape ore—On Feb. 12, 349 tons, at 10s. 6d. per unit, for a produce of 30⅛ per cent.; on Feb. 26, 340 tons, at 10s. 2d. per unit, for a produce of 32 per cent. The private sales of Chili ore and regulus referred to above fetched 10s. and 10s. 6d. per unit respectively, the lowest prices on record for either sort. There has been a fair trade in Chili bars, which have changed hands chiefly at from 54*l*. 10s. to 56*l*. for g.o.b.'s. The shipments of this article for the month of January compare as follows:—1876, 4560 tons; 1877, 5359 tons; 1878, 4028 tons; 1879, 4600 tons. Price of g.o.b.'s, Jan. 31, 1876, 81*l*.; 1877, 73*l*.; 1878, 66*l*.; 1879, 55*l*.

March 1. RICHARDSON AND SON.

Copper remained dull and neglected during the past month, the price of Chili bars stiffening a little during the third week but closed again easier. Wallaroo and Burra are quoted about 20s. per ton lower. Charters from the West Coast were advised for first half of February 2300 tons; for second half, 1100 tons. We quote—Chili bars, 55*l*.; Wallaroo, 63*l*. 10s.; Burra, 63*l*.; tough, 59*l*.; manufactured, 65*l*. to 66*l*.; ore and regulus, 10s. to 10s. 6d. per unit. The imports and exports for January were, by the Board of Trade Returns—

IMPORTS.		1878.	1877.	1876.
Ore	Tons	7007	6484	2951
Regulus		3337	1573	1098
Copper		5013	1574	2588
EXPORTS.				
Foreign raw		751	1282	970
English raw		1287	1707	944
Manufactured, including yellow metal and brass		1774	2330	2368

London, March 6. FRENCH AND SMITH.

Up to the close of 1878 statistics (copper) showed indisputably that whilst imports had decreased as compared with 1877, exports had much increased, the combined results leading to the belief that consumers generally had reduced their stocks to a very low ebb, and hence the large stocks in public warehouses. During January, according to the Board of Trade Returns, the figures would appear to have commenced a sort of revolution, as the imports show a heavy comparative increase, and the exports nearly as large a diminution, while stocks have likewise heavily increased. It would seem, therefore, that low prices have neither tended to decrease production nor, indeed, to stimulate demand; and if the first two months' trade of the new year are to be a test of the immediate future, bad times are still in store for copper. The brass trade, since the forming of their Association towards the close of last year, have reduced prices ¼d. per lb. all round, while the yellow metal houses (following the example of the limited company in this particular branch of the trade) are competing against each other to such an extent for the comparatively few orders that offer, that it is impossible to foresee the end of such a system of trading.

We subjoin our usual monthly statistics:—The imports of copper into England for the first month of the following years were: 1875, 7935 tons; 1876, 6268; 1877, 4597; 1878, 4544; and 1879, 8832 tons. The exports for the same periods were: 1875, 3856 tons; 1876, 3882; 1877, 4025; 1878, 5155; and 1879, 3644 tons. The position from March 1, 1878, to March 1, 1879, was as follows:—

	Price.	Stock on hand.	Stock, including afloat and chartered. Advised by mail only.
1878—March 1	£ 65 0 0	Tons 33,235	Tons 40,535
April 1	63 10 0	34,345	41,460
May 1	62 0 0	36,416	42,725
June 1	64 10 0	37,410	42,809
July 1	64 0 0	35,983	41,782
August 1	61 10 0	38,913	43,325
September 1	60 15 0	38,676	44,985
October 1	60 0 0	39,097	44,767
November 1	57 0 0	39,712	47,567
December 1	59 0 0	39,008	47,073
1879—January 1	58 0 0	37,890	45,474
February 1	56 0 0	39,538	47,153
March 1	55 0 0	39,452	48,266

And the comparative positions at the same date of the past four years with the present:—

	Price.	Stock.	Stock, including afloat and chartered. Advised by mail only.
1875—March 1	£ 82 0 0	Tons 20,990	Tons 32,242
1876—March 1	76 0 0	21,963	30,217
1877—March 1	71 0 0	28,461	36,047
1878—March 1	65 0 0	33,235	40,535
1879—March 1	55 0 0	39,452	48,266

The charters to Feb. 28, 1879, were 7600 tons, against 8600 tons in 1878.

Leadenhall-street, London, March 6. HENRY ROGERS, SONS, AND CO.

Chili bars showed a gradual decline of 20s. per ton during the past month; g.o.b. selling from 55*l*. 15s. to 54*l*. 15s., with a few transactions at 54*l*. 10s. Chilian Regulus also sold at 10s. 6d., and Cape ores, by tender, at 10s. 3d. per unit. These are the lowest prices on record. In several quarters from whence regular and large supplies have for years past been available there are indications of the adverse effect of this low range of price, and, though not, perhaps, a question affecting the immediate course of the market, this must not be lost sight of. The charters of copper produce advised by cablegram from Valparaiso represent 3400 tons in fine copper for the month of February. According to the Board of Trade Returns for the United Kingdom the imports and exports of copper during the first month of the following years, estimated in fine, were as follows:—

IMPORTS.	1879.	1878.	1877.
Copper in ores and pyrites Tons	2138	2184	1769
Ditto, regulus	1679	7 6	549
Ditto, bars, &c.	5013	1574	2885
Total imports	8830	4494	4903
EXPORTS.			
Manufactured copper, &c.	1686	2185	2411
Unmanufactured ditto	1283	1708	[illegible]
Foreign ditto	751	1262	970
Total exports	3720	5155	4025

Leadenhall-street, March 6. VIVIAN, YOUNGER, AND BOND.

THE TIN TRADE.

	Jan. 31, 1879.	Feb. 28, 1879.	Feb. 28, 1878.	Feb. 28, 1877.
Straits and Australian, spot Tons	9,122	9,254	7,760	8,063
Ditto, landing	402	442	986	564
Straits afloat	1,225	1,139	880	725
Australian, afloat	1,605	1,687	2,300	2,750
Banca, on warrants	1,966	1,704	1,134	1,047
Billiton, spot	1,975	2,096	1,452	1,131
Ditto, afloat	800	1,200	1,400	1,200
Australian tin in Holland	341	320	478	730
Total Tons	17,437	17,842	16,290	16,210
Deliveries during the month in London	1,050	1,200	1,040	717
Ditto, Holland	351	590	533	712
Total Tons	1,401	1,790*	1,593	1,429

* Also 131 tons overside to America.

Shipments during the month from Straits Tons	950	225	160	525
Ditto, Australia	483	485	853	1,645
	During 12 months endg. Feb. 28, '79.	During 12 months endg. Feb. 28, '78.	During 12 months endg. Feb. 28, '77.	
Shipments from Straits to London Tons	4,465	2,686	5,617	
Shipments from Australia to London	8,764	9,392	7,069	
Deliveries of foreign tin in London	12,345	11,289	10,097	

Banca in Trading Company's hands and afloat, 1741 tons.

London, February 28. A. STRAUSS AND CO.

There was a dull feeling in our tin market at the beginning of the month, and with a very slow demand for consumption prices on the whole were rather easier, with but little offering however. A gradually increasing speculative demand, almost amounting to animation during the last few days, has since set in, and we have to report an advance of fully 3 fl. upon last month's closing quotations. Speculators, notwithstanding the heavy stocks, have once more taken the article into favour, and its immediate future in consequence rests with them. Consumption thus far has been very slow in following the upward movement. Banca has been in limited demand for export, but the enquiry for tin, *ex* coming sales, has been most active. Consumers have thus been enabled to buy parcels on the spot comparatively cheap. The price advanced from 36½ fl. to 39½ fl. Contracts for delivery, *ex* Mafeh and May sales, changed hands from 37 fl. to 40 fl. Billiton was selling in small lots at 35¾ fl., when speculation commenced operating on a very large scale. The price advanced to 39 fl. with important transactions, parcels on the spot commanding the same rates as those for forward delivery: 12,000 peculs Billiton offered in public sale at Batavia on Feb. 10 fetched the average price of 38·42 fl., costing to sell here about 34¾ fl. per steamer. The ensuing sale, comprising the same quantity, will be held on Monday, April 14.

The position of Banca tin in Holland on Feb. 28, according to the official returns of the Dutch Trading Company, was:—

	1879.	1878.	1877.
Import in February Slabs	12,205	972	19,710
Total two months	26,200	5,033	34,080
Deliveries in February	8,400	11,206	13,120
Total two months	14,952	19,323	20,331
Stock second hand	54,527	36,300	37,540
Unsold stock	29,139	14,974	34,080
Total stock	83,666	51,274	67,620
Afloat Peculs	13,325	4,200	1,775
Statement of Billiton:—			
Import in February Slabs	14,000	10,300	11,847
Total two months	22,700	19,729	18,447
Deliveries in February	10,110	4,404	9,262
Total two months	13,530	10,172	16,725
Stock	67,082	48,067	32,341
Afloat Peculs	20,000	15,000	15,000
Quotation } Banca	40 fl.	40⅛ fl.	43 fl.
Feb. 28. } Billiton	39	38½	42

These combined returns of Banca and Billiton for 1879, compared with those for 1878, exhibit—An increase of the import for February of 467 tons; an increase of the import for the two months of 754 tons; an increase of the deliveries for February of 91 tons; a decrease of the deliveries for the two months of 32 tons; an increase of the stock second hand of 1164 tons; an increase of the unsold stock of 443 tons; an increase of the total stock of 1607 tons; a decline of the quotation of Banca of 16s. per ton. EBELING AND HAVELAAR.

Rotterdam, February 28.

Tin remained comparatively easy throughout February, with but little trade doing; towards the close of the month, however, a speculative demand arose, and as much as 64*l*. was paid spot, and 64*l*. 10s. forward, but prices subsequently receded, and 63*l*. is the present quotation. Genuine buyers would appear to have held aloof since the year commenced, but they must come into the market sooner or later, when prices may possibly be further advanced.

March 6. HENRY ROGERS, SONS, AND CO.

The market for tin opened quietly, and foreign for some time fluctuated between 59*l*. 10s. and 60*l*. at which considerable parcels were taken up for purposes of investment. Later, a strong demand for consumption sprung up, and towards the close developed into activity. Straits and Australian for forward delivery sold at 64*l*. 10s., and on the spot at 64*l*., closing easier at 63*l*. Below we give our usual statistics:—

	1879. Feb. 1.	1879. Mar. 1.	1878. Mar. 1.	1877. Mar 1.
Foreign in London Tons	9,522	9,693	8,268	8,622
Banca in Holland	1,966	1,704	1,134	1,148
Billiton in Holland	1,974	2,097	1,446	1,010
Afloat for Europe, Straits, advised by mail and wire	1,200	1,140	750	730
Afloat, Australian ditto	1,850	1,958	2,300	2,750
Afloat, Billiton	800	1,200	1,400	1,200
Banca in Dutch Trading Co.'s hands	529	910	470	945
Banca afloat, by sailing vessels	1,188	830	260	111
Total	18,729	19,532	16,398	16,466

March 6. FRENCH AND SMITH.

The price of foreign tin varied from 60s. to 59s. 3d. during the greater part of the past month, when a speculative demand set in, and prices rose rapidly to 64s. 6d., not, however, to be maintained, for the next quotation was 63s. to 62s. 6d. At the close the market hardened—63s. 9d. to 63s. The deliveries of foreign for the month were 600 tons from Holland, and from London 12 0 tons. The February shipments from Australia are estimated at 500 tons, and from the Straits as 250 tons. The stock of foreign tin in London and Holland is thus estimated:—

	1879. Feb. 1.	1879. Mar. 1.	1878. Mar. 1.	1877. Mar. 1.
Foreign tin in London Tons	9,521	9,714	8,618	8,605
Banca tin in Holland	1,966	1,704	1,134	1,048
Ditto (in Company's hands)	529	911	468	1,065
Billiton tin in Holland	1,975	2,096	1,502	1,010
Total	13,991	14,425	11,720	11,728
Quantity of tin afloat for Europe	5,000	4,500	4,300	4,200

March 6. VIVIAN, YOUNGER, AND BOND.

The Panulcillo Copper Company notify to the debenture holders that the coupons due June 15 and those due Dec. 15 next may both now be presented at the Consolidated Bank for payment under discount.

Original Correspondence.

FLAGSTAFF SILVER MINING COMPANY OF UTAH.

SIR,—Some editorial remarks on the affairs of this company which appeared in your issue of February 15 has been with great impropriety pronounced by Mr. Kerly (the company's solicitor), in a letter published in the Journal of the following week, as emanating from me. This is mere assumption on his part, and though it is not my business to inquire into the sources of your information, I take this opportunity of saying that they appear to be good, and you have tendered some very excellent advice to the share and debenture holders.

No doubt I have the offer to deal with the property, and Mr. Kerly is quite right in supposing that I wish to be thought a friend of the company. He attributes to me the desire to be thought disinterested, which I never pretended to be, and am not, but he is wrong in supposing that I wish the shareholders to regard me as "the one to whom they must look for a means of escape from their present troubles." That is more than anyone can be. I think their troubles are over, but I also think I have it in my power to offer them some compensation for their past losses.

Their property has entirely changed hands, and when the solicitor talks of reconstruction he must pardon me for saying he employs a very ill-considered expression. That he "does not know who the sole owner is" I am prepared to believe, for I have not told him; and I also accept his assertion that he does not understand "who can be in a position to deal with the property"—nevertheless, the fact is the property has been dealt with, and it is evident he does not know whether "the questions affecting the company's title are disposed of" or not.

The recent circular by the directors asking for 1000*l.*, "to relieve the temporary wants of the company," has been treated with judicious inattention by the share holders; I am content, therefore, to leave them without any further warning against throwing more money away. This is disinterested on my part, because, as a creditor, I should be glad to know of the existence of funds that I could lay hold of; so would probably Mr. Kerly, the company's solicitor. Let us say, in conclusion, that what Mr. Kerly does not know, and does not understand, I shall be happy to communicate and explain to anyone who will take the trouble to call upon me.—*Great Winchester street, E.C., March 7.* E. PEARSON.

[For remainder of Original Correspondence, see to-day's Supplement.]

Meetings of Public Companies.

WHEAL CREBOR MINING COMPANY.

The usual four-monthly meeting of Wheal Crebor shareholders was held at the offices of the company, on Friday,

Mr. J. Y. WATSON, F.G.S., in the chair.

The notice convening the meeting having been read,

The report was as follows:—

March 6.—Since your last general meeting the 120 east has been driven 5 fms. 5 ft. 3 in. on a lode varying in width from 3 to 4 ft., and in value from 5*l.* to 8*l.* per fathom. In the present end the lode is 4 ft. wide, composed principally of quartz, capel, mundic, and copper ore, but not enough of the latter to value. The 180 east has been driven 13 fms. 1 ft. on a lode varying from 15 in. to 7 ft. in width. About 11 fathoms behind the present end we intersected a cross-course, which disordered the lode for a short distance, but after leaving the influence of the cross-course it gradually improved, and when 4 fathoms east of cross-course it was 2 ft. wide, and worth 5*l.* per fathom, and has since increased to 7 ft. wide, and worth 15*l.* per fathom. In the present end the lode is 4 ft. wide, and worth 8*l.* per fathom, with every indication of a speedy improvement. The 72 east has been driven 5 fms. 2 ft. on a lode which has been small and poor. The 48 east has been driven 2 fms. 5 ft. 4 in.; but as the lode we were driving on was poor, and southing some 20° more than the average bearing of the lode throughout the mine, I have suspended the driving east, and put the men to cross-cut north with a view to intersecting a part of the lode gone off in that direction 15 fms. behind the end. The cross-cut is now driven 2 fms. 4 ft. 6 in., and it will take 6 ft. or 8 ft. further driving to cut the north part should it continue in the same direction. The new shaft has been sunk 8 fms. 5 ft., making the total depth from surface 30 fms. 5 ft. The lode in the shaft is 18 in. wide, yielding some good quality arsenical mundic, with a little copper ore intermixed, but nothing to value at present, although looking promising for improvement. No. 1 stope in the back of the 150 is 4 ft. wide, and worth 10*l.* per fathom. No. 2 stope in the back of the same level is 3 ft. wide, and worth 5*l.* per fathom. Our object now is to push on the 120 as fast as possible, so as to get under the ore ground in the 108. This end is now 21 fms. behind the 108, but as we have already driven 7 fms. through profitable ore ground in the latter level we have only 14 fms. further to drive the 120 to reach the ore ground gone down in the 108, which I hope to accomplish in less than four months from this time. The new shaft, as you will see on referring to the section, will go down in the heart of the ore ground now standing untouched in the bottom of the 120, where the lode for 40 fms. in length will average 4 to 5 tons of good ore per fathom; and a new shoot of ore lately discovered in the 108, which I hope the 120 to reach in four months. I, therefore, consider the future prospects of the mine to be very encouraging.—JOHN ANDREWS.

The CHAIRMAN stated—As there are thirteen months' pay in a miner's year we have an extra month to be charged in the accounts to be presented to-day; thus making five months' costs against four months' returns, and the result is a loss of 628*l.* 9s. 1d., and a debit balance against the mine of 451*l.* 0s. 9d., charging up every liability of the company to the costs paid on Feb. 20, and being up to Jan. 25. It should be added that in this loss of 628*l.* 9s. 1d. on the five months is included a sum of 157*l.* 13s. 7d. for sinking the shaft in the new ground. This shaft is now down to the depth of 30 fathoms, and in this new ground lying between two courses of ore, one of which, in Wheal Crebor, has produced over 150,000*l.*, and that in Crowndale almost as much—two of the levels, the 108 and 120 east have come into ore since the last meeting, and the result is partly shown in the last sale of ore, which realised 315*l.* 2s. 9d., and an average of about 2*l.* 10s. per ton, as against 172*l.* 12s. 9d., and an average of 1*l.* 15s. per ton in December. In reference to the future the agent is very sanguine, and the committee consider that a call sufficient to meet the debit balance will be enough for to-day, and that will be 1s. 6d. per share.

The accounts, together with the agent's report, were submitted and passed, and a call of 1s. 6d. per share made.

Mr. P. Kinnear was elected a member of the committee in the place of the late Mr. Emanuel.

WHEAL OWLES (St. Just).—At a meeting of the adventurers held on the mine yesterday, the accounts showed a loss of 670*l.* on 16 weeks' working. This, however, includes 400*l.* for interest and commission, making an actual loss of only 270*l.* The balance against the mine amounts to about 19,000*l.* A call of 10s. per share was made.

WHEAL KITTY (St. Agnes).—At the general meeting on Thursday (Mr. William Teague in the chair), the financial statement showed a debit-balance of 1947*l.*, charging the cost at December, 1878, and charging 10 months cost against seven months returns. The balance was carried forward to next account, and no call made. Mr. Teague having represented that it would be desirable to obtain the ground to the west of Wheal Kitty, recommends that an application be made to the lords for the same; it was then resolved that the application for the ground west of Wheal Kitty be left with the manager, and that he see the lords or their agents, with a view of working the new ground mentioned above, provided it can be obtained, and on what terms also as to the future rate of dues to be paid. The meeting was then adjourned until the necessary particulars are obtained, and a meeting of shareholders will then be convened to receive the report of such application, and to determine on the future course of action to be taken in respect to the future working of the mine.

HYDRAULIC GOLD MINING IN CALIFORNIA.—From local exchanges we obtain the following particulars of the bullion turned out by some of the provincial companies during the past year. It is not, of course, a complete list, but the Mining and Scientific Press, of San Francisco, considers it reliable, the figures being obtained in most cases from the offices of the different companies:—

Milton Co.	$ 540,000
Eureka Lake and Yuba Co.	300,000
North Bloomfield	320,000
Blue Banks	120,000
Other mines on the San Juan Channel	475,000
Blue Tent	100,000
Mines on the Washington Ridge, including Quaker Hill, Hunt's Hill, You Bet, Little York, &c.	700,000
Placer county mines, including Dutch Flat, Gold Run, and Forest Hill divide	1,000,000
Sierra Co., a total of	600,000
Excelsior W. and G. M. Co., Yuba Co.	302,000
Other mines of Yuba Co.	300,000
Spring Valley Co, Butte Co.	275,000
Other mines of Butte Co.	180,000
Plumas Co., a total of	180,000
Shasta Co.	100,000
Trinity Co.	1,250,000
Siskiyou Co.	750,000
Eldorado Amador, & other counties further south, a total of	1,000,000
Total	$8,492,000

The result is very large, and shows what an important business that of Hydraulic Mining is becoming—indeed, we fancy that the bulk of the gold from California will in the future be produced from the auriferous ground so largely scattered throughout the State. There is but little hydraulic mining prosecuted on any large scale. Outside of California some of the adjoining States possess auriferous ground deposits, but are not nearly so extensive nor generally so much as in that State.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Ten years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the *Mining Journal*, with the following announcement; which is now reproduced in consequence of the numerous letters and enquiries handed to them of late in reply to one which appeared in the Journal on the Clementina Mine.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash or for the usual fornightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

THE VALUE OF SPECULATIONS.—By a mistake of the printers our article under this heading got placed at page 208 of the Journal last week, instead of at page 200.

THE COST-BOOK.—When a mine is properly conducted under this system periodical meetings should be held, and every liability up to the day of meeting laid before the shareholders. If a profit is shown it should be divided—if a loss, a call *pro rata* should be made and collected at once. Nothing can be simpler or safer than this when properly carried out. Again, any amount of shares can be transferred under a sixpenny stamp; and any shareholder desirous of retiring from a company can do so by relinquishing his shares by a formal letter to the purser, and by paying up his proportion of liabilities to the end of the month in which he relinquishes. Here is simplicity and safety. The abuses which have been allowed to creep into the Cost-Book, and which have made its name so objectionable to some people, have been chiefly owing to costs not having been charged up at the meetings of shareholders. Thus the total liabilities have not been shown, and consequently insufficient calls have been made. Again, dividends have been paid when costs have not been charged up—the said costs remaining a liability. In calling mines arrears have been allowed to accumulate to too great an extent, and those who can pay have had to pay for those who cannot. It will be seen, however, if the rules are strictly adhered to, and shareholders insist on knowing at their meetings the exact position of their accounts, the Cost-Book is both simple, inexpensive, and safe.

NEW PARYS MOUNTAIN COMPANY.—The particulars of this will be announced in a few days, and instead of issuing *bonus* shares, to which objections may be made, the company will probably be in 45,000*l.* shares of 1*l.* each. Of these 22,500, fully paid up, will be given to the present holders, *pro rata*, for the property. And as 4000*l.* or 5000*l.* will be ample working capital for the new company a certain number of shares will be issued as 1*l.* fully paid at 10s. per share, the same in effect as issuing them at 1*l.* and giving a bonus share for every share taken, but without its objections. Some weeks ago when this matter was first mooted we had a great many letters from parties asking us to reserve shares for them. We are now making up a list, which we head with 1000 shares for ourselves, and shall be glad to hear at once the exact number those who applied to us, and any others, wish to have. It is probable that the 10s. per share will be payable in two instalments—5s. down, and 5s. in two or three months.

ARENDAL COPPER.—We understand the advices are very favourable indeed, but cannot say why the reports are not published in the Journal, as certainly they ought to be.

SATURDAY, MARCH 1.—Market for tin shares weaker, shares in lead mines firmer. Carn Brea, 29 to 31; Dolcoath, 25 to 27; South Frances, 9 to 9¼; Tincroft, 8½ to 9¼; Peevor, 9 to 9½; West Basset, 3 to 4; West Frances, 2¼ to 3½; Agar, 3¾ to 4; Grenville, 1½ to 2¼; South Condurrow, 10¾ to 10¾; Van, 14½ to 15½; Herodsfoot, 3 to 4; Great Laxey, 14 to 15; Roman Gravels, 6 to 6¼; Tankerville, 2 to 2¼; Leadhills, 1¼ to 1¾; Aberllyn, 10 to 12; Morfa Du, 17s. 6d. to 22s. 6d.; Parys Mountain, 9s. to 11s.; West Tolgus, 30 to 32.

MONDAY, MARCH 3.—Market very quiet for both tin and lead shares. Van, 14½ to 15½; Great Laxey, 14½ to 15½; Herodsfoot, 3 to 4; West Chiverton, 15s. to 20s.; Roman Gravels, 6 to 6¼; Aberllyn, 10 to 12; Clementina Lead, 1 to 1¾; Leadhills, 1¾ to 1¾; East Van, 1¾ to 1¾; Pateley Bridge, 15s. to 20s.; South Condurrow, 10 to 10½; South Frances, 9 to 9¼; Peevor, 9 to 9½; Tincroft, 8½ to 9¼; Dolcoath, 25 to 27; Crebor, 4s. to 6s.; Parys Mountain, 9s. to 11s.

TUESDAY, MARCH 4.—Market continues very quiet, and prices are about the same as recorded yesterday.

WEDNESDAY, MARCH 5.—Market more active for both tin and lead shares at an advance. Van, 16 to 18; Great Laxey, 14½ to 15½; Herodfoot, 3 to 4; Aberllyn, 10 to 12; Leadhills, 1¾ to 1¾; Roman Gravels, 6 to 6½; Tankerville, 2 to 2½ Clementina Lead, 1 to 1¼; Bettws-y-Coed, 1 to 1¾; Carn Brea, 29 to 31; Dolcoath, 25 to 27½; South Condurrow, 10½ to 11; South Frances, 9 to 9¼; Tincroft, 8½ to 9½; Peevor, 9¼ to 10¾; West Basset, 3½ to 4; West Frances, 2¾ to 3¼; Agar, 3¾ to 4; Grenville, 1½ to 2; Parys Mountain, 9s. to 11s.; Crebor, 5s. to 7s.; Morfa Du, 17s. 6d. to 22s. 6d.; West Tolgus, 30 to 32; Devon Great Consols, 1½ to 2.

THURSDAY, MARCH 6.—There has been a fair demand for both lead and tin shares at improved prices. Van, 17½ to 18½; Great Laxey, 14½ to 15½; Roman Gravels, 6 to 6½; Aberllyn, 10 to 12; Herodsfoot, 3 to 4; Leadhills, 1¾ to 1¾; Tankerville, 2 to 2½; D'Eresby Mountain, 30 to 40; Clementina, 1 to 1¾; Carn Brea, 30 to 32; Dolcoath, 26 to 28; South Condurrow, 10½ to 11; South Frances, 9 to 9½; Peevor, 10 to 10¼; Tincroft, 9 to 10; West Basset, 4 to 4½; West Frances, 3 to 3½; Agar, 3½ to 4; Parys Mountain, 9s. to 11s.; Morfa Du, 17s. 6d. to 22s. 6d.; Crebor, 4s. to 6s.; Don Pedro, 18s. to 20s.; Richmond, 9 to 9¼; Santa Barbara, 37s. 6d. to 42s 6d.

FRIDAY, MARCH 7.—Market very firm, and with the the exception of a rise in Van and Great Laxey prices are about the same as quoted yesterday. Van, 18 to 12; Great Laxey, 15 to 15½.

MR. WILLIAM H. H. WATSON having had some years' experience in Practical Engineering and Mining in Cornwall, as well as two years' practice in the London Stock and Share Markets, begs to offer his advice and services to Shareholders and Intending Investors in Mines, and in the Purchase and Sale of Shares.

W. H. H. W. has Special Business in Herodsfoot, Parys Mountain, Wheal Crebor, South Frances, Clementina, Aberllyn, &c., at the lowest net market prices.

Address: W. H. H. WATSON, 1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, E.C.

STEDDFA (Lead).—This very promising young mine has recently been formed into a limited liability company, divided into 12,000 shares of 1*l.* each. About 1000*l.* has been spent in driving levels into the mountain, and two good lodes have already been discovered. It is held under the Crown, at 1-18th royalty, and it adjoins Nant-y-Cria, a very rich mine for lead and blende, and the same lodes run through Steddfa sett. The present adit end, according to dialing, is within 3 fms. of reaching the principal rich Nant-y-Cria lode, at a depth of 30 fms. from surface. The sett is a mile and a half long on the course of the lode, and situated in the same district as the celebrated Frongoch, Lisburne, and Cwmystwith Mines. There is sufficient water power for any amount of machinery all the year round, which flows from a great height. No machinery will be required for dressing purposes, and fair quantities of lead and blende can be raised immediately. Operations on an extended scale will be carried on this spring.

MARKET ECHOES AND MINING MATTERS.

The impression that the worst of the mining depression is over appears to be steadily gaining ground, confidence in the early advent of better times having been much strengthened by the advances which have taken place in both tin and lead. The ores of the former are worth fully 5*l.* per ton more than they were 10 days since, whilst lead is quoted 10s. per ton higher in London. As a consequence of the rise in the tin standards, the utterances at the public meetings held in Cornwall during the past week—notably at Carn Brea, Tincroft, and at the West Basset auction sale of forfeited shares—have been characterised by a very hopeful vein. At the Tincroft meeting in particular the Chairman stated that he had "every reason for supposing that better times were approaching," a supposition which appears to be justified by the undoubted decrease of Australian supplies, and the enormous consumption which is going on—a consumption steadily increasing. Perhaps the grounds of hope in the future would be additionally strengthened if less supplies were coming in from the Straits; but it is to the increased consumption that we must look to compensate for this drawback. That many merchants and others connected with the tin market are expecting higher prices for the metal appears to be pretty generally believed, and this belief receives some confirmation from the fact that the Tincroft adventurers have received, through their manager, an offer of advanced prices for all the tin they have to sell within the next five years, an offer which, it is hardly necessary to say, has not been accepted. The adventurers are in the enviable position of being able to raise their ores for 27*l.* per ton. About a month since, in writing of the lessons learnt from the competition of Australia with the home mines—a competition which was followed by its natural result, lower prices—we expressed our opinion that Cornwall had no reason to be dissatisfied with those lessons, and we added—"The introduction of Australian tin may turn out hereafter to have been an unmixed boon to the Cornish tin mining industry, for it is something to say, even now that tin can be produced at a cost of less than 35*l.* per ton—a price which a few years since would have seemed almost impossible, even taking into account the lower prices of materials and wages." That our views are shared by others is evident from the statements of the Tincroft chairman and others qualified to judge. At the meeting Capt. Teague said—"If the depression should pass over and things improve we shall be none the worse off because of the difficulties which we have had to contend with, for we have learnt a lesson in economy of which we shall be able hereafter, under more favourable circumstances, to take advantage;" and subsequently at the Carn Brea meeting it was remarked that the adventurers had had a great deal to contend with in the depression which had for such a considerable time prevailed, but that when better times came they would find they would have a benefit from all they had passed through, in the economy which had been forced upon them by the circumstances of the times. Good very often came out of evil, and this it was hoped would be their experience in the future. Formerly they considered they were doing remarkably well if they could raise and return tin at 50*l.* per ton, but now they were in a position to return tin at Carn Brea at 35*l.* per ton. It is to the lesson in economy which has been so thoroughly learnt—to the great credit be it said of many of our Cornish managers—that we are indebted for the present life in Cornish tin mining. Thanks to that lesson Cornwall has not so much fear now of colonial supplies, for we doubt if even Australia can produce mined tin for less than 27*l.* per ton.

A difference of opinion appears to exist amongst some officials of cost-book companies regarding the transfer of shares before a call is paid on all the shares in an adventurer's name. A short time since the following case came under our notice: A bought of B (say) 10 shares in a certain cost-book company, his previous holding being (say) 5 shares. Subsequent to A's purchase, but before the 10 shares could be registered in his name a heavy call was made. A thereupon resold the shares to C, and paid the call on the 10 standing in B's name, and registered them in his own. Upon C presenting the transfer for registration, it was refused because the call on the whole 15 shares in B's name had not been paid. On the other hand, the following occurred at Carn Brea meeting last week. An adventurer, referring to the call made some time previously, said he understood that no shares could be transferred until the whole call thereon had been paid, upon which the manager replied—"That is to some extent a mistake. If a person holds 10 shares, and has paid the calls upon 5, he can transfer those 5." Here are two diametrically opposed decisions on a very simple point, both coming from officials well versed in cost-book customs. Which is right?

Wheal Peevor meeting is to be held on Tuesday. It is stated that a dividend of 7s. 6d. per share will be declared. The quotation, which a short time since was about 7½, is now 9 ¼ to 10, with a strong demand. This mine is also able to produce its tin at a very low cost, and bids fair to be one of the most successful in the county.

THE MINING MARKET.—An improvement is noticeable, business being brisker and larger in amount. The rise in lead has sent up Vans from about 15 to 18½, whilst several other lead shares have been steadier, and have exhibited a rising tendency. Tin shares have been in capital demand, although this has not been continued at its best to the close. Copper shares, with the exception of Parys Mountain, are quiet and dull. Collieries quite neglected. Chapel House offered at 2*l.* The Thorpe Gawber directors are seeking to place 12,000*l.* 10 per cent. mortgage debentures, which will be a first charge on the property of the company. The amount is required to repay bank overdraft, and to provide further working capital. Since its incorporation, in 1872, the whole of the ordinary capital of the company (100,000*l.*) has been repaid in dividends. For the past half-year a loss of 78*l.* was made. In foreign shares Richmond have occupied the chief attention, and have fluctuated between 9 and 9¼. JAMES H. CROFTS.

THE WEEK.

SATURDAY, MARCH 1.—Several lead shares were in strong request, owing to an improvement in the price of the metal. Van rose 1*l.*, 15 to 16, and Linares ¼, while there was an active demand for Herodsfoot, Roman Gravels, Great Laxey, and Tankerville. Altogether the mining market was in a state of considerable activity. Cape Copper shares, however, were exceptionally dull, and ultimately receded to 25*l.* on expectation of the dividends being reduced. The shares have not touched so low a figure for a very long time past.

MONDAY.—Van shares were again higher, and Richmond rose to 9¼. Cape Copper recovered 1. American Railway shares were again pressed for sale, the closing prices being as follows:—Erie (Seconds and the Gold Bonds), 59 to 59½, ex the funded coupons; Erie shares, 25¼ to 25½; Philadelphia and Reading General Mortgage, 48 to 50; Atlantic and Great Western 1st Mortgage, 28 to 30; 2nd, 9 to 11; 3rd, 4¾ to 5¼. Leadhills, 1¾ to 1½; Hultafall, ¾ to 1¼; Parys Mountain, 8s. to 10s.; Richmond, 9¼ to 9½; Don Pedro, 17s. to 19s.; Cape Copper, 25 to 25½.

TUESDAY.—There was a strong recovery in Atlantic and Great Western securities, which since the meeting held last week have been pressed unduly for sale. The First rose 2¼, to 32¼; and the Second 1, to 12. Erie descriptions were firmer without much business being done. Philadelphia and Reading General Mortgage touched 48½; the bonds are worth picking up at this. Mining shares met with active enquiry, Richmond and Eberhardt advanced ¼, and Van 1, prices being 9¾ to 9¾, 3½ to 3⅝, and Van 16¼ to 17½. Parys Mountain, 9s. to 11s.; Port Phillip, 10s. to 12s. 6d.; Roman Gravels, 6¾ to 6¾.

WEDNESDAY.—The dealings to-day in mining shares were at mostly enhanced prices. Cape Copper, after falling below 25*l.*, finally closed firm at 26*l.* A large business was done in Fortuna, Linares, and Alamillos, and all the three are now from 10s. to 15s. higher than they were a short time ago. United Mexican met with enquiry at 4*l.*, and Richmond at 9¼. In Railways Caledonian was dull at 95, the dividend of 4¼ not being liked, but such is the uncertain value of the stock that it is frequently recommended for purchase after a bad dividend. North British has now receded to 84.

THURSDAY.—The tendency was again all upwards in mining shares. West Chiverton realised 1¼, and Tincroft 9½. A large business was done in Cape Copper, in several instances at 27. Van shares were quoted 17½ to 18½, and still wanted. The Erie market was active and animated. The First Mortgage advanced to 106, and the Second to 62. The Gold Bonds were also quoted appreciably higher. Home railways were neglected. In the afternoon Brighton A receded sharply below 110.

FRIDAY (*Opening*).—Mining shares continue active. During the week Van have advanced 4*l.*, and Great Laxey 1*l.* Cape Copper shares have recovered 2*l.* West Assheton shares from being offered at nominal prices have sprung into sudden demand, buyers offering 15s. Hultafall are wanted, but there appear to be no sellers at the low prices quoted. Leadhills have advanced ¾. Others in request are Herodsfoot, South Darren, West Chiverton, and Roman Gravels. The following are the quotations current:—Van, 18 to 19. Cape Copper, 27½. West Chiverton, ¾ to 1¼. South Frances, 9½. Tankerville, 2¼. Leadhills, 1¼ to 2. Great Laxey, 15 to 16. Parys Mountain, 9s. to 11s. Railways are lifeless. Brighton, A, can be obtained at 109¼. Turks are offered at 12¾, and Ottaman Bank at ½. Erie are easier all round.—*Two o'clock.*—Brighton, A, at one time touched 110, but are now 109¼ again. Van shares have been dealt in at 19. All Turkish stocks are flat. The Fives are offered at 12½, and the 1869 issue has receded to 15¾, being ½ down. Egyptian Preference has fallen to 69¼. Richmond, 9¼ to 9½. United Mexican, 3½ to 3⅝.—*Four o'clock.*—Erie Second are now 62½; buyers same as last night. Atlantic and Great Western First Mortgage close dull at $32. The Philadelphia and Reading market has been quiet throughout the day. Turks have shown no disposition to rally, and close at about the lowest. Chapel House, 2¼ to 2¾. Newport Abercarn, 3¼ to 4. Bilson and Crump, 2 to 3. Cardiff and Swansea, ¾ to 1. FERDINAND R. KIRK.

GENERAL MARKETS.—English railways still continue dull, and with very few exceptions show a fall for the week. Brighton, A, Caledonian, Sheffield, and North British have been very heavily sold. The Caledonian dividend was announced this week—4¼ per cent. against 6 per cent. this time last year. Although 4¼ per cent. was quite as much as we expected the stock fell 1 per cent. on the announcement. The traffic returns still show a considerable decrease, with the exception of Great Eastern and Metropolitan District. There has been very little doing in foreign stocks. Egyptians are steady, though rather lower for the week. Turks have been dull, on the publication of the Russian protest against the present scheme in hand for the arrangement of the finances.

Chilian bonds are lower. Other descriptions do not show much variation. American securities and railways were dull in the early part of the week. The terms of the proposed lease of the Atlantic and Great Western Railway to the Erie Company do not give satisfaction to the Atlantic holders, and considerable opposition may be expected to the scheme. Although the Bank Return was not quite so favourable this week, the English Funds keep very firm. This, though, is owing in a great measure to the large speculative accounts now open for the fall.

Several tin mines have had a good rise, and business is getting brisker in shares in lead mines.—W. H. H. WATSON: 1, *St. Michael's alley, Cornhill, E.C., March* 7

THE VAN MINES—MONTHLY REPORT.

March 5.—The 120, west of shaft, is driving in the bastard by the side of the main lode, which has now become rather hard, and for some time past yielding good stones of ore on the bottom of the north side of the level. From the joints in the side of the main lode issued a good quantity of water and gas. This end is now 30 fms. west of shaft; set to four men, at 120s. per fathom. The 105 west is driven 111 fms. The present end is worth 1½ ton of lead per cubic fathom, but we are daily looking forward to a change for the better by getting into the run of ore ground seen going down in the bottom of the 90, ahead of us; set to six men, at 95s. per fathom. The stripping of the lode to full width, at a point 90 fms. west of shaft, in the side of this level, is worth 2¼ tons of lead ore per cubic fathom; set to eight men, at 60s. per fathom.

At a point 60 fathoms west of shaft, in the side of the same level, we have cut and timbered a winze plat for the purpose of sinking a winze by the side of the main lode to ventilate the 120 when it reaches this point; the winze is set to four men, at 90s. per fathom. The 105 east is temporarily suspended, as we want the men elsewhere for a few weeks. The 90 is extended west of shaft 138 fathoms. The produce of lead in this level varies considerably, but the present end is worth 3½ tons per cubic fathom; set to six men, at 90s. per fathom. The stopes in the back of this level, east and west of shaft, are on the average 22 ft. wide, and worth 2¼ tons of lead ore per cubic fathom. You will observe a diminished valuation of these stopes; the reason is in consequence of a slip making its appearance in three of the best of these stopes, which considerably interferes with their produce, and consequently affects the average valuation.

We hope, however, that this falling off is but temporary. They are set as under: The 100 west to six men, at 42s. 6d. per fathom. The 90 west to six men, at 50s. per fathom. The 80 west to eight men, at 42s. 6d. per fathom. The 70 west to six men, at 80s. per fathom. The 60 west to eight men, at 80s. per fathom. The 40 west to six men, at 50s. per fathom. The 30 west to eight men, at 42s. 6d. per fathom. The 10 west to eight men, at 40s. per fathom. The 10 east to eight men, at 40s. per fathom. The 20 east to eight men, at 40s. per fathom. The 30 east to four men, at 42s. 6d. per fathom. A rise in the back of the 70 stope for the purpose of facilitating the work of filling these stopes is set to six men, at 120s. per fathom; this rise is going up in the bastard on the south side of the main lode. The 75 is extended 10 fms. west of Edward's shaft; the lode in the present end is composed of flookan and strong spar, but no lead; set to four men, at 80s. per fathom. At a point 150 fathoms west of Seaham's shaft, in the side of this level, we have set a pare of men to cut a winze plat preparatory to sinking a winze in advance of the 90 west, for the purpose of ventilating that end; set to six men, to sink at 100s. per fathom. The 75 fathom permanent level is set to four men, to drive east and west of Seaham's shaft, at 70s. per fathom. The stopes in the back of the 75, east and west of shaft, are worth on the average 18 cwts of lead ore per cubic fathom; average width, 13 ft. These stopes are set as under:—The 100 west, to six men, at 40s. per fathom. The 90 west, to six men, at 47s. 6d. per fathom. The 80 west, to six men, at 50s. per fathom. The 60 west, to eight men, at 50s. per fathom. The 50 west, to eight men, at 50s. per fathom. The 40 west, to eight men, at 52s. 6d. per fathom. The 30 west, to eight men, at 40s. per fathom. The 20 west, to four men, at 40s. per fathom. The 25 east, to six men, at 42s. 6d. per fathom. The 40 east, to six men, at 70s. per fathom. The 60 fathom permanent level west is set to four men, at 80s. per cubic fathom.

The stopes in the back of the 60, east and west of shaft, are on the average 12 ft. 6 in. wide, and worth 1 ton of lead ore per cubic fathom. These stopes are set as under:—The 115 west, to eight men, at 65s. per fathom. The 100 west, to six men, at 50s. per fathom. The 72 west, to eight men, at 50s. per fathom. The 64 west, to eight men, at 55s. per fathom. The 56 west, to eight men, at 60s. per fathom. The 48 west, to four men, at 55s. per fathom. The 32 west, to eight men, at 70s. per fathom. The 16 west, to eight men, at 70s. per fathom. The 8 west, to eight men, at 70s. per fathom. The stope in the back of the 30 east is set to six men, at 70s. per fathom; lode here about 10 ft. wide, and is worth 1 ton lead ore per cubic fathom. I omitted to state that the 8, 16, and 22 fm. level stopes in the back of the 60 are now working out into the deads, and the men have more timbering to do in order to work it safely, consequently we have to give them a higher price per fathom. On surface the machinery is in good order. Our sale takes place to-morrow upon 500 tons of lead ore and 150 tons of blende.—WILLIAM WILLIAMS.

ENGINEERING PROGRESS IN FOREIGN COUNTRIES.—The papers read before the Institution of Civil Engineers referring to engineering progress in foreign countries are so numerous and so elaborate that it is almost impossible for the ordinary reader, who has to attend to his own professional business, to fully appreciate them in their bearing upon the question of the advance made. To remove the difficulty a very valuable little volume has been edited by Mr. James Forrest, the secretary, giving a systematised abstract of the papers of this class which have been read before the Institution during the four years ending 1878. There are, practically, four complete memoirs, detailing respectively the progress in Public Works Engineering, by Mr. L. F. Vernon-Harcourt; in Machinery, by Mr. D. Kinnear Clark; in Mining and Metallurgy, by Mr. Hilary Bauermann; and in the Application of Electrical Science to Engineering, by Mr. Paget Higgs. The matter will not fail to be appreciated by all who have the privilege of obtaining the abstracts.

THE LOCOMOTIVE ENGINE.—The Rudimentary Treatise on the Locomotive Engine in Weale's Series was long regarded as an excellent little book of reference, but the progress of engineering has been so great that the work had become altogether antiquated. The treatise has now been remodelled, and enlarged by Mr. D. Kinnear Clark, who has abridged Mr. Dempsey's original work, whilst retaining all the essential particulars, including the illustrated account of the standard six-wheeled passenger locomotive constructed by Robert Stephenson and Co. in the era of 1838-43, but has made large additions himself, treating of the modern locomotives exhibiting the distinguishing types of English engines by examples; one of them, an express passenger engine, constructed by Messrs. Beyer, Peacock, and Co., is fully described and illustrated in detail. The contrast thus afforded between the early locomotive and the perfected engine of to-day supplies, as is very truly remarked, an instructive study for the student, and material for reflection to the more advanced engineer. There is also a chapter on the resistance of engines and trains on railways, in which the chief contingencies effecting the resistance of trains and the performance of engines are brought into consideration. Considering the purpose the book is intended to serve it is very concise, and contains a large amount of really valuable information.

MONTHLY JOURNAL OF SCIENCE.—The March number of this magazine contains several interesting articles. The Keys of Death gives a very clear notion of the nature of poisons, or rather of what constitutes poisons. Prof. S. P. Thompson's article on Some New Optical Illusions and that of Mr. Crooke's on Electrical Insulation in Vacua are well worth reading. The notices of books, correspondence, and proceedings of societies are of the usual character.

CASSELL'S PUBLICATIONS.—"Science for All" for the current month embraces articles—What is Power? by Mr. Scott-Moncrieff; History out of Refuse Heaps, by Dr. Robert Brown, which is admirably illustrated; What is in the Interior of the Earth? by Mr. Wm. Durham; How Sunshine warms the Earth, by Dr. R. J. Mann; What are the Stars made of? by Mr. W. Ackroyd; and on the Protective Colours of Animals, by Mr. A. R. Wallace. "Great Industries of Great Britain" for March contains a biography of Sir Joseph Whitworth; Hemp, Flax, and Jute, No. 13; Iron and Steel, No. 14; Cotton, No. 13; Shipbuilding, No. 14; and Wool and Worsted, No. 13. Knight's "Practical Dictionary of Mechanics" has reached the 27th monthly part, and extends from Felt onward, and contains a portion of the article Fire-Engine.

BESSEMER CONVERTERS.—The improvements of Mr. S. THOMAS, of Battersea, consists in making the tuyers and bottoms, and sometimes the entire lining, of Bessemer converters of nearly pure silica in the form of sandstone, sand, or gannister, the particles of silica being cemented together by means of a solution of alkaline silicate (preferably silicate of soda), sometimes with the addition of a little fire-clay. To make tuyers he takes a nearly pure silicious sandstone or gannister ground to powder, or pure silicious sand. He mixes it intimately (in a mortar mill or otherwise) with a solution of silicate of soda (preferably that kind known as neutral silicate), sometimes adding a little fire-clay. He then rams a portion of the damp mass thus produced into a tuyer mould of the ordinary construction. The rods which form the blast passages are, however, placed in position in the mould before the material is introduced. The material is then rammed round the rods till the mould is filled. The ramming may be conveniently effected by a strong plate loosely fitting the mould, with perforations through which the rods or prongs can pass freely. This plate is fixed to a suitable handle and apparatus for applying pressure. When the rammed silicious material has set sufficiently the rods are withdrawn and the moulds removed. The tuyer is then dried and fired. He uses a similar, but thinner, mixture as a slurry and as a cement when silica bricks are used for linings. Instead of making each tuyer separately the whole bottom may be made of such a mixture as above described, rammed tightly round a number of slightly tapered rods, equal in number and diameter to the desired number of blast passages; this is, of course, most easily done when a dry bottom is used. When separate tuyers are not used the bottom plate is perforated with a number of holes, corresponding and equal in number to the blast passages, and into each of these holes he prefers that there should be a short length of metal pipe driven, passing a short distance into the corresponding blast passage. In this way the blast is led well into the several blast passages. He does not in any way claim the mere device of dispensing with separate tuyers and substituting perforated bottoms, as that has been proposed before. The tuyers, or perforated bottoms, made as above described, will be found to last much longer than the fire-clay tuyers now used. The same mixture of silica and silicate of soda is an excellent one to ram bottoms of converters with, and may also be used as a lining to ram the whole of the vessel with.

IMPROVED MINE CAGES.—According to the invention of Mr. J. MAIN, of Crossfield, Cumberland, there are a pair of gripping blocks for each fixed guide, and each block is wedge-shaped in side view, the bottom being the broader end. The outer inclined sides of the blocks are fitted to work in strong inclined guide cheeks fixed to the framing of the cage or hoist, and are kept in contact with such cheeks, so that each block is quite clear of the fixed wooden guide when at the lower part of its guide cheek, but is wedged against the wooden guide when at the upper part of its guide cheek. The four gripping blocks are suspended by chains from pulleys or levers on two horizontal rocking shafts carried in the upper part of the framing of the cage or hoist, and these rocking shafts have levers fixed on their middles, to which levers there are jointed the lower ends of rods fixed at their upper ends to a cross head, to which last the winding or hoisting rope is attached. Another part of the invention relates to the prevention of injury from overwinding, and consists in combining the arrangements hereinbefore described with any convenient kind of detaching hooks acted on by stationary stops whenever the cage is raised at all above its proper height. A slack chain or rope is made to connect the main rope and the part acted on by the light safety rope, and whenever the main rope becomes detached the connecting rope or chain becomes tightened, and causes the gripping blocks to act and prevent the descent of the cage. The third part of the invention consists in arranging indicators in connection with the springs or any moving part of the safety apparatus of mine cages, hoists, or the like, such indicators consisting of dials with pointers, and being placed in prominent or easily seen positions on the cage framing, so as to show at all times the relative positions of the movable parts, and give timely warning if any part gets deranged or out of order.

CHILEAN GRAVELS, AND GOLD WASHINGS.

People here are beginning to be convinced that Chile is quite as rich as California in gold gravels; in fact, Chile is a duplicate of California in its climate, geology, parallel mountain ranges, long line of sea coast, and mineral wealth. From the Chilean historian of the time of the conquest we gather that the Chilean Indians paid a yearly tribute of 1400 lbs. of gold to the Inca of Peru. Almagro, a Spanish officer, seized the tribute on its road to Cuzco, the residence of the Inca, and divided it amongst his soldiers. No doubt this gold induced him to march south to Chile, across the still dreaded desert of Atacama, to secure the mines whence this gold was produced. The tribute was cast into small bars of gold, marked with the Inca's stamp, and it was escorted to Peru by 400 bowmen, and there were rejoicings at the principal towns on the road. With the treasure there were nuggets worth $700 and $500.

The Indians of Coquimbo having revolted and killed the Spaniards there, those of Marga-Marga asked permission to retire from the mines, and the book of the muncipality of Santiago says as follows:—Friday, Nov. 1, 1549: The miners of Marga-Marga have written to this municipality that they desire to quit the mines, hearing what has passed at Coquimbo, but should they do so the King of Spain would lose his royalty of one-fifth, which, valued according to the ordinance of March 3, would be $64,973, and consequently the total extraction from Marga-Marga would be some $300,000 yearly. Immediately after founding the capital of Chile at Santiago the Spaniards commenced to work (A.D. 1549) the gold washings at Marga-Marga with Indians, and extracted such large amounts of gold that it was weighed in the steelyard. Some Spaniards had as many as 600 Indians working for them, and as a result the gold was freely lavished on all sides.

At Quilacoya the Governor Valdivia employed from 10,000 to 15,000 Indians, and he pushed his conquests still further south, and founded the "Seven Cities," in order to work the gold washings at Aranco, Angol, Canete, La Imperial, Valdivia, Osorno, and Villarica. The Indians revolted, and reconquered their Araucanian territory, and destroyed the Seven Cities, and still remain in possession of a great part of the southern territory. A foreigner now and then enters amongst the Indians, but he must beware lest he attempt to look for and much less to work for gold. The traditions of their having been made to work for gold still exist.

There are abundant data to prove that the gold washings were worked on an immense scale by the early Spaniards, as the records mention well-known places, a few of which I have visited; and since attention has been given to the subject, I may state that the work was done almost entirely in the river beds and perhaps some ground sluicing, but the beaches are untouched. Gold continued to be extracted by the pan and by ground sluicing till the discovery in California, which induced the greater part of the Chilean gold miners to go there, and since that period consequently our washings have been almost idle.

The idea prevalent here has been that the gold washings must be exhausted after 300 years' working, and the jewellers who have latterly purchased the small quantities extracted these last 15 years tell me they never had even the curiosity to visit the localities whence it was produced. It is true, however, as a rule that the miners refuse to state. It has appeared impossible both to foreigners and natives that such an extensive gold field at Marga-Marga, ten miles long by five miles wide, could exist almost at the outskirts of Valparaiso, the principal seaport of Chile, without their being aware of its value. I may add that there was no knowledge of such a mode as the hydraulic system to wash down the gravel, and to have stated that 1000 tons of it could be washed daily was to be set down at once as an arrant liar. It was Paraff alone who was to do wonders and pay off the national debt of Chile.

It has taken three years continual writing, speaking, showing data to parties, and convincing some by taking them to see the gravel deposits to induce a partial belief. We are on the right road at last, and people are commencing to prospect and bring samples from different quarters. H. A. Holcomb has contracted for some $80,000 the construction of a canal, the pipes, flumes, sluices, &c., necessary for the Niblinto washings near Chillan, and John Simpson is in treaty for similar works at Caren. There is one point of difference between the Chilean and Californian gold washings. Ours are located west of our coast range, and near the sea, at the outlet of some stream or river, and they extend from the Straits of Magellan, where Messrs. Hamilton and Shanklin worked, up to our most northern city, Copiapo, towards which, however, water is scarce. We do not appear to have what corresponds to your blue lead at the foot of our snowy Cordilleras. Our coast range is traversed by numerous gold ledges, which appear to have been the sources of our gold gravels. I should say our dead rivers must have run from Magellan Straits to the north, and our marine current still runs towards the equator, both inversely to yours, but in a similar manner towards the equator. The dead rivers must have run to the west of our coast range, since the gravels are deposited on that side, and not on the eastern fall or central valley; they account accordingly for the finding of our gravels all close to the coast, and in every case, I believe, traversed at right angles by the live streams running into the sea, which lay bare and in many places show the bedrock upon which the gravel rests. These remarks refer to the central portion of Chile, between Coquimbo and Concepcion. In the south, or Indian territory, it would appear the gold is found right across from the foot of the Cordillera to the coast, but we have not heard of any deep gravels. Our river beds, as I said before, have been worked where the sand or gravel was shallow and there was little water, but not in any places where the sand is deep and pumping or any machinery is required.

We are unfortunately separated from you by long distance, difference of language, and consequent ignorance of your mines and mining progress, and bad postal arrangements. Mining claims, however, are easily and cheaply secured, and the law will protect you in holding your mines. Your capitalists and miners will find a new field where they will make fortunes as well as give new life to Chile, now suffering from a severe commercial crisis and from the low price of copper, to the mining of which all the energy and capital of the country has been devoted, and which delays the working of the gold washing and mines, for which latter there is not one single stamp mill yet erected. American eagles have been sold as high as 30, premium and drafts on the United States in proportion. There will be a demand for hydraulic mining engineers, and those with proper credentials will secure first-class positions. Miners who understand working monitors, erecting flumes, tail sluices, and practical hydraulic mining will do well, as also those who understand river-bed workings on their own account will find plenty of room. The rest, as regards climate, security, and government, are satisfactory. Those who are not doing well in California and want a new field may come. They seem to consider almost any arrival from California as an authority, and one lately arrived gave an unfavourable opinion on a river-bed claim on the Marga-Marga stream without knowing anything of or seeing the gravel deposits above the claim; surely in proportion to the richness and extent of the gravel benches so will the river-bed claims be. Finally, therefore, we require capital and competent hydraulic and river-bed miners to give us new life, and I consider we can offer them good prospects.

Valparaiso, Nov. 22. JOHN P. SEWELL.

— *Mining and Scientific Press* (San Francisco, Feb. 8).

TIN IN AUSTRALIA.

The following is an extract of a letter received last Thursday from the Mount Bischoff district, Tasmania. The gentleman who forwards it to us states that the writer is from the immediate neighbourhood of Redruth, that he is a good miner, and a trustworthy man. The writer says:—

No doubt you will continue to hear some fine reports from this great country, but I think many beside myself are coming to find out that those glowing accounts are not all true. In fact, I think there is very little truth in them, if any. From what I can learn there is not a mine, or the prospect of one, of any account in the whole country, with the exception of the Mount Bischoff Company's claim, that is going to do much toward keeping down the tin market; and in a year or two more it is my opinion that you will have nothing to fear from this country. With this I send you the report of a gentleman who was sent down to inspect and report on that most extraordinary locality, the Pieman River district. From previous accounts there was nothing like it again in all the world; Mount Bischoff was only a fool to that place, and when you read this report you may put down in your mind that many of the places will end in a similar way. I do tell those great fellows here, that know everything, that I would rather have the Tincroft or Dolcoath mines at home than have every tin mine on this island, and they are worth more to day than all this island is for tin. Our mine is poor; I have been waiting a long time for some of the company to come over. We must either put in a battery or shut it up altogether; I expect we shall put in one, but unless there are some lodes found different to anything seen yet here there is nothing to last but a short time, and my opinion is there never will be any defined lodes found in this locality, but time will prove. I was glad to see that the tin market was improving a little, and I think that tin will go up again when the fools of this country leave off frightening the world about their mountains of tin. I thought I had seen a good bit of the world before this, but a man must come to Tasmania to be acquainted with all sorts and conditions of society, "Lick the World."

We have received, says the Mercury (Tasmanian paper), the following letter written by Mr. Woods, in charge of the party sent to West Coast by the Outlands Prospecting Company. It was addressed to a gentleman in Outlands, who has sent it to us, and who has the consent of the writer to publish the contents in the interests of the public:—"According to promise, I write to let you know the true character of the West Coast. I think I am now competent to express a very decided opinion thereon, and can say with certainty that the West Coast, as a tin producing country, is a failure. To say that it is not what it was represented to be would be a very mild way of putting it. The whole affair is a perfect farce—a mixture of tomfoolery and rascality—and perhaps the greatest and most successful swindle that has ever been perpetrated in the known world. I have seen most of the so called tin sections down here, and do not hesitate to say that they are, with one or two miserable exceptions, the most complete 'shicers' it would be possible to conceive. The great Heemskirk lode, that was to eclipse Bischoff, has been all sent up to Hobart Town in specimens. At less than 2 ft. from the surface it cut out clean—beautifully clean—and not one solitary specimen is left now of the wonderful lode some few months ago the pride and glory of the West Coast. Little did I think when gazing at some fine specimens of lode tin exposed to the admiring gaze of a deluded public in a certain chemist's shop window in Hobart Town, that I saw before me the veritable Heemskirk lode. Little did I imagine that the huge placards placed conspicuously above these same wonderful specimens, and on which were printed in equally huge letters the magic words 'From Heemskirk,' required the addition of but two words to render the farce complete. They should have read thus—'The lode from Heemskirk,' for such indeed it was—the lode, the whole lode, and nothing but the lode, so help me Bob. And in three short months the alluvial sections, where long washed 6 lbs. and 10 lbs. to the dish, with 6 ft. of dirt, have been all worked out, and the tin raised during that time with a large staff of men amounted to just 3½ tons. So much for the prospects of the great Heemskirk, which is but a fair sample of the great claims on the West Coast from the Great Western to the Great Pieman extended; from the Great Pieman Extended to the two miserable exceptions. These are the Glenora, where, with 12 men, it is possible to raise from 18 cwts. to 1 ton per week, and the Montagu, which, though not quite equal to the Glenora, is considered very good for the West Coast. But I think I have said quite enough about the 'cussed' place at present, at least as regards the ground taken up. I feel sure you agree with me on that point. And now for a few words as to the prospecting inducements. I have seen and prospected a little of the country from the Pieman to the Collingwood river, and my advice to intending prospectors is—dont come. Some may say, 'Oh, there has been a little tin found there, consequently there is a chance.' To these I would say, 'Well, perhaps there is a chance, but take my straight tip, it's a d——d poor one.' And I would also recommend that before attempting the Parson's Hood they should ascend Mount Wellington, and put down a few holes in the vicinity of the Pinnacle. The chances are about equal, and it is far easier to reach the Pinnacle than to cross the Hood. Of course, it would be most foolish presumption to assert that nothing payable will be found on the West Coast. I am speaking of the stream tin, and my firm conviction is that stream tin in payable quantities will never be obtained here. There may be a few (a very few) little patches suitable for co-operative parties, but nothing more. The country in many parts presents favourable indications for gold; in fact, with the exception of Mount Heemskirk, the Meredith range, and two or three more little patches of granite, it is all slate country, and a few fine specks of gold to the dish may be obtained almost everywhere, but, like the tin, it has not been found in payable quantities.—THOMAS WOODS."—*West Briton.*

ECONOMIC TREATMENT OF COPPER PYRITES.

Two important inventions for extracting copper from its ores have recently been patented by Mr. HENRY DOETSCH, of Copthall Buildings, which promise to give very economic results. His process for extracting copper from its natural sulphides consists in calcining the pyrites in a special furnace, which may have the form of a covered limekiln, or be similar to the sulphate of soda furnaces, or on the type of a reverberatory furnace, the only condition being that this furnace be placed in communication with a chamber for receiving the sulphur volatilised, and a special condenser for the sulphurous vapours simultaneously produced. The heat is obtained by the combustion of a portion of the pyrites, or by any other kind of fuel, and serves to extract sulphur and sulphurous acid from the remaining portion of these pyrites. The sulphurous acid collected in the condenser, which latter may be of any shape or form, is employed to dissolve the copper out of its ores, either crude or calcined by direct contact, and also the production of hyposulphite of soda, which is used in lieu of iron for precipitating the copper in the shape of a sulphide, easily reducible into metallic copper by fusion in contact with the air.

The other process invented by Mr. Doetsch is applicable to the treatment of ores containing copper alone or in combination with gold or silver, and consists in the application to ground or pulverised ores of copper of hydrochloric acid, either manufactured specially for the purpose, or produced as waste liquor at the alkali works, or of *aqua regia*, or of the residium of the chlorine works, or of the chlorides of iron, or of manganese, or of ferric salts. The liquors containing the above substances are placed in direct contact with the ores, and if these do not contain the necessary oxidating agents, then he adds manganese or nitric acid to them in sufficient quantity for the purpose; or he introduces into the liquors to be used either nitrous vapours or chlorine gas, or else he leaves them exposed sufficiently long to atmospheric influences to produce the necessary degree of oxidation of the contained salts. This process recommends itself by the possibility of re-employing indefinitely the spent liquors after replacing waste and oxygen. The copper which enters into solution is precipitated by means of iron or zinc in a metallic state, or by hyposulphites or sulphuretted hydrogen in the shape of a sulphide easily reducible in an open furnace.

The Llansawel Lead Mining Company

(LIMITED).

CAPITAL £30,000, IN 6000 SHARES OF £5 EACH.

£1 on application; £1 10s. on allotment.

Incorporated with Limited Liability under the Companies Acts, 1862 and 1867, by which the liability of the shareholder is strictly limited to the amount of his shares.

DIRECTORS.

Colonel ARTHUR NEED, J.P., Fountain Dale, Mansfield, Notts.
JAS. CROSSLAND, Esq., Longwood House, Fixby, Huddersfield.
J. HENRY OUTHWAITE, Esq., Bedford Park, Chiswick.

BANKERS—NATIONAL PROVINCIAL BANK OF ENGLAND, Lincoln's Inn, Carey-street, London.

SOLICITORS—Messrs. BLAKE AND WEALL, 22, Surrey-street, Strand, London.

CONSULTING ENGINEER—R. J. FRECHEVILLE, Esq.

SECRETARY—JOSEPH J. OUTHWAITE.

REGISTERED OFFICES,—4, AGAR CHAMBERS, AGAR STREET, STRAND.

PROSPECTUS.

This company is formed for the purpose of acquiring the lease and plant of and for working the valuable mines, veins, lodes, and seams of lead and all other metallic ores in and under the farms and lands known as Talley Demesne, Penygarrey, Cillynfawr, and Bwlchyrhyd, situate in the parishes of Talley and Llansawel, in the county of Carmarthen, and containing about 201 acres. The company have also taken other powers in the Memorandum of Association for more advantageously working the mines comprised in the said lease or under any adjacent lands.

The lodes of the mines are a continuation westward of the celebrated lodes of the Nant-y-Mwyn Mines, which have been worked to immense profit. The sett is extensive, running about one mile from east to west, and the same extent north and south, and contains a number of well defined lodes.

The property is held under lease, dated 16th November, 1878, for 21 years from Michaelmas, 1878. The yearly rental is £40, merging into a royalty at the low figure of 1-16th.

Plans, showing the exact position of the lodes, with reports by eminent and practical mining engineers, may be obtained, and specimens of the ore seen at the company's offices.

The mines are about seven miles from the railway stations of Llandilo and Talley Road, so that the produce can be conveyed thither at little expense. The projected railway from Llandilo to Lampeter will pass within a quarter of a mile of the mine, and will when constructed be of great advantage to this property. The extent of work already done may be seen from the plans and reports. It includes a deep adit level driven upwards of 250 fathoms, which effectually drains the mine, thereby saving the expense of pumping machinery. Two other levels have been driven above this. A shaft has been sunk from the surface connecting these levels. All these works have been done at a large expenditure. Judging from the quantity of ore the mines have already yielded, and the present existing defined lodes, together with the favourable reports of experienced mining engineers, it is confidently anticipated that with a further moderate outlay in the erection of necessary machinery, and for further development, the mine will be productive and profitable

The services of Mr. R. J. Frecheville, Associate of the Royal School of Mines, who has had ten years practical experience of mining, both at home and abroad, have been secured as consulting engineer for the company.

The vendor has agreed to dispose of his interest for £15,000, of which £1000 is to be paid in cash, upon transfer, and £1000 by instalments—viz, one moiety in six months and the other in twelve months. The balance in paid-up shares of the company, which shares shall not be transferable until a dividend of 5 per cent. has been paid to the ordinary shareholders out of profits, nor until 1000 other shares shall have been applied for and allotted.

The only contract entered into on behalf of the company is dated 23rd December, 1878, and is made between John Henry Outhwaite of the one part, and Alfred Stephen Groom for and on behalf of the company of the other part, being the contract for the purchase of the property and plant, which, together with the Articles of Association, may be seen at the offices of the company.

Applications for shares may be made to the bankers on the form enclosed in the prospectus, or to the Secretary of the company. Should no allotment be made the deposit will be returned without any deduction; and should a smaller number of shares than those applied for be allotted to any applicant the balance of his deposit will be applied towards the amount payable on allotment.

Prospectuses and forms of application for shares may be obtained at the offices of the company, or of the bankers.

No promotion money whatever will be paid. The preliminary expenses will be confined to the amount actually expended in the formation and registration of the company.

EXTRACTS FROM THE REPORTS OF WELL-KNOWN MINING ENGINEERS.

Capt. JOSEPH EVANS, in his report, dated April 11, 1878, says:—There are four lodes, running nearly east and west. I would recommend you to open the engine-shaft to deep level, where you will find a branch of lead ore yielding 3 tons per fathom. I have seen in the stopes 14 in. of solid lead. The mine bears evidence for itself, and only requires a little time to make it one of the most profitable in Wales.

Also, Capt. W. HANCOCK, in his report, dated Nov. 30, 1878, says:—In my opinion you will be amply remunerated for your outlay (for further information see plan and section recently made). A great feature is the mine can be worked at a considerable depth without the aid of pumping machinery.

R. J. FRECHEVILLE says:—I visited your Llansawel Mines, near Talley, South Wales, and found that you had in your No. 4 level a vein showing 4 in. of lead. As this is at a depth of not more than from 15 to 20 fms. below the surface, and the hill rising above you gives a large quantity of backs, I consider it to be an exceedingly favourable prospect. In the No. 2 and No. 3 levels there are at least two other veins; from their appearance and the general character of the ground, I am of the opinion that they will amply repay further explorations. The No. 1 or deep adit will drain these mines for some years to come, and thus obviate the necessity of erecting pumping machinery. The killas which forms the country rock, and the elvan course which is in close proximity to your mines, are favourable indications of this class of mine. The other conditions of working are favourable. I think from what I have seen that you have a valuable property.

Capt. W. T. BRYANT, in his report, dated Dec. 20, 1878, says:—You have in this mine a valuable property, and from appearances I am of opinion that it will justify the outlay of capital for development, and well worthy the consideration of capitalists as a good investment. I have confidence in recommending it as such.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

THE FOEL CLYNNOG SLATE QUARRIES (Limited).—Capital 30,000*l.*, in shares of 5*l.* To carry on the business of slate and other quarries, generally in the United Kingdom, and particularly to acquire, work, and carry on the slate quarries known as the Foel Slate Quarries, in Clynnog, Carnarvon. To acquire any property suitable for the purposes of the company in the United Kingdom. The subscribers (who take one share each) are—E. J. Jackson, 4, York-terrace, coal and brick merchant; J. D. Jackson, 4, York-terrace, coal and brick merchant; W. C. Prescott, 152, Buckingham Palace-road, gentleman; F. V. Andrews, 8, Old Jewry, accountant; A. Horton, 8, Old Jewry, accountant; G. E. Newton, 8, Mecklenburg-street, gentlemen; F. B. Doering, Victoria-street, E.C.

COLESHILL COAL COMPANY (Limited).—Capital 5000*l.*, in shares of 50*l.* each. To acquire by purchase or otherwise a lease between the Right Honourable Charles Crespigny, Baron Vivian, and Lady Vivian of the one part, and W. B. Turner, W. Burnyeat, junior, J. Moore, and M. Kennedy of the other part; also an indenture of assignment between the Coleshill Colliery Company (Limited), and the said Messrs. Turner, Burnyeat, Moore, and Kennedy, demising certain estates, collieries, mines, &c., in Coleshill, Flintshire, and the inclines, plant, levels, and others effects belonging thereto. To use, work, develope, and extend the said collieries. To construct smelting furnaces, coke ovens, patent fuel works, brick manufactories, inclines, tramways, tenements and offices, and to carry on the business of miners, colliery proprietors, smelters, and fire-brick and coke manufacturers.

UNIVERSAL REVERSIONARY LOAN AND DISCOUNT SOCIETY (Limited).—Capital 4000*l.*, in shares of 10*l.* The purchase of reversionary interests, the re-selling for profit, advancing money on all kinds of security. The subscribers (who take one share each) are—E. Bates, Bayswater; W. A. Burn, 2, Middle Temple-lane; J. G. Harwood, Wandsworth; P. Phelps, Weston-super-Mare: H. J. Jackson, West Croydon; F. J. Elliot, 12, Colebrook-row; George Finch, Harrow.

HAVANT GAS COMPANY (Limited).—Capital 3000*l.*, in shares of 5*l.* Now re-registered under the Limited Liability Acts.

THE QUEENSBURY LIBERAL CLUB (Limited).—Capital 2000*l.*, in shares or 1*l.* The purchase of lands and buildings in the township of Clayton, Bradford, and Northowram, Halifax, or in either of these, to erect the club, and such other buildings as may be deemed necessary. The subscribers are—J. Stock, Queensbury, 60; E. H. Wright, Queensbury, 50; J. Foster, Queensbury, 5; A. Kershaw, Queensbury, 20; J. Firth, Queensbury, 20; J. Briggs, Queensbury, 20; S. Benn, Queensbury, 20.

WILLMER BROTHERS AND COMPANY (Limited).—Capital 5000*l.*, in shares of 10*l.* The acquisition by purchase of the business hitherto carried on by Charles Willmer and Sons, with all the plant, machinery, book debts, assets, and effects, and to carry on the business of printers, lithographers, &c. The subscribers are—Charles Willmer, Birkenhead, 5; Charles W. Willmer, Birkenhead, 5; F. Willmer, Birkenhead, 5; Jane Willmer, Birkenhead, 1; A. W. Willmer, Birkenhead, 1; Laura Willmer, Birkenhead, 1; Jane H. Willmer, Birkenhead, 1; George H. Willmer, Birkenhead, 1.

TRAMWAYS CONSTRUCTION COMPANY (Limited). — Capital 100,000*l.*, in shares of 20*l.* To construct and equip tramways, railways, and other public works in the United Kingdom or any foreign State, colony, or dependency. The subscribers (who take one share each) are—J. W. Jones, 3, Bolton-street; W. H. Wynall, 39, Oakley-crescent; J. O. Pilkington, 3, Garden-court, Temple; A. Chickested, 35, Albemarle-street; J. Quick, jun., 94, Grosvenor-road; A. Prickent, 53A, Old Broad-street.

TEXAS FREEHOLD FARM AND EMIGRATION UNION (Limited).—Capital 250,000*l.*, in 5*l.* A shares and 5*l.* B shares. Providing A shares with farms in Texas with the necessary stock of implements for husbandry, or with allotments of land with houses and shops and other things for trading purposes, and providing for the passage of emigrants and shareholders with their families, and provisioning them for a short period after their arrival. The cost to be advanced from the company's funds, repayable afterwards. The subscribers are—L. Abbotts, Warwick, 5; T. E. Hart, Castle Eden, 10; W. Abraham, Pontypridd, 5; W. Irwin, Swindon, 1; W. G. Kingsbury, 23, Finsbury Pavement, 5; H. Langridge, Woodford, 5; G. Simpton, Acton, 5.

THE CORNISH BANK (Limited).—Capital 250,000*l.*, in shares of 50*l.* To carry on at Truro, Falmouth, Redruth, and Penryn and elsewhere in England the business of banking in all its branches. The subscribers are—R. Clarke, Towerhirst, 80; J. Jose, Millingey, 60; William Treloar, Stilinan, 50; J. Henderson, Newham, 40; J. C. Daubuz, Killiow, 100; W. Teague, Treliske, 500; T. Chirgwin, Truro, 100.

TRAMWAYS OF FRANCE (Limited).—Capital 120,000*l.*, in shares of 10*l.* To carry out an agreement for the purchase of 6000 shares of the Campagnie des Tramways de Rouen. To acquire any other tramway or omnibus company's business, and to work and carry on the same. The subscribers (who take one share each) are—R. H. Broome, Reigate; E. Etlinger, 60, Queen Victoria-street; J. Humphreys, 13, Stratford-place; T. W. Perry, 39, Stoke Newington; T. J. Selby, 4, Copthall Buildings; F. J. Warner, Finsbury; A. F. Solomon, Leatherhead.

SHAREHOLDERS' GUARDIAN ASSURANCE (Limited).—To afford to subscribers information relative to joint-stock and other enterprises which may be submitted as investments. Every member of the association undertakes to contribute to the assets of the association in the event of its being wound up. The subscribers are—E. Bates, 5, Monmouth-road; R. Clark, 10, Friar-street; D. M. Dewar, 2, Red Lion-square; G. H. Aylett, 5, Craven-terrace; G. W. Owen, Hornsey Rise; A. Graham, 158, Cottenham-road; E. Rowland, Upper Holloway.

THE ACCIDENTAL PERSONAL INJURY INSURANCE COMPANY (Limited).—Capital 50,000*l.*, in shares of 2*l.* The transaction of the business of insurance against or upon personal accidents and injuries. The subscribers are—J. Pickett, M.D., 100, Blenheim-crescent, 25; C. G. Grueber, 1, Railway Approach, 5; W. J. Cox, Yard and Railway Approach, 2; J. R. P. Kirby, 24, Great Russell-street, 1; H. Hacker, Greenwich, 1; S. Lidington, Peckham, 1; A. W. Samson, Northolt, 25.

LEECH'S PATENT PROTECTOR LETTER-BOX COMPANY (Limited).—Capital 5000*l.*, in shares of 1*l.* The purchasing from F. L. Leech and R. Taylor their patent rights, letters, and interests in an improvement for letter-boxes, and to manufacture and deal in the same and other inventions. The proprietors are—J. Fielding, Stockport, 10; R. R. Taylor, Walsden, 10; J. Farrow, Manchester, 10; T. Shaw, Longsight, 10; G. P. Barnes, Ashton-on-Mersey, 10; T. B. O'Connor, Longeight, 5; F. W. Dawson, Broughton, 5.

POTOSI MINING COMPANY, AND MOCUPIA AND NEW YORK MINING COMPANY.

[TRANSLATION.]

TO THE PUBLIC.

Reserving to ourselves the right of making known hereafter the great injuries which the Mocupia and New York Mining Company have inflicted upon the Potosi Mining Company, by breaking into one of the veins of gold of their subterranean lands, injuries which the investigation now being made will establish, we publish the following Protest, in order to protect the rights and rights of action of the said Potosi Company.

We need at present only say that there are abundant proofs of there having been extracted a great quantity of tons of auriferous quartz, and that its product represents a very large capital, the amount of which will have to be refunded to the Potosi Company by the company which has committed the trespass.

PROTEST.

HAHN SCHOCK and Co., citizens and merchants trading in this city, in the name and as the representatives of the Potosi Mining Company, by these presents declare: that, Whereas according to information transmitted to us by Mr. GEORGE ATTWOOD, agent general of the said mining company, their mineral lands have been broken into, in the vein of gold known by the name of the "Chile Gold Vein," by the Mocupia and New York Company; that there are trustworthy proofs of this trespass since the miners of the last named company were met by those of the Potosi Company working in that part of the gold vein marked in the eastern part of the galleries Nos. 2 and 3 of the mine belonging to the Potosi Company, which bounds with that of the Mocupia and New York Company, known by the name of the "Mine of Cenicero," from which mine they entered into that of the Potosi Company, and extracted from it a quantity of quartz of great value; and that by such trespass grave injuries have been inflicted upon the company which we represent; therefore we formally and solemnly protest in their name, once, twice, thrice, or as many times as may be necessary by the law against the Mocupia and New York Company, and against whomsoever more it may be necessary, for the costs, damages, and injuries which have been or may be inflicted upon them by the act which has called forth this protest, leaving the company which we represent saved free to make use of its rights of action when and how it may think fit. Thus we say, depose to and sign in the presence of the Registrar of the Department Héres and of the witnesses who subscribe in Ciudad Bolivar, this fifteenth day of November of the year one thousand eight hundred and seventy-eight.

(Signed) HAHN SCHOCK AND Co.
Witness (Signed) F. GRILLET.
Witness (Signed) J. M. AVENDANO.

Registry Office of Department Héres, State of Guayana, Ciudad Bolivar, November 15, 1878.

The preceding document has been before me, and the witnesses subscribed therein, extended and signed by the deponents to whose declaration I give faith; and it remains registered and signed by me on this date, the same deponents and witnesses being declared at folio 1 and over, No. 54, series third of the protocol in duplicate seventh number, which is in this office under my charge, in this fourth quarter of this current year 1878.

Sealed with the Seal of this Office,—THE REGISTRAR.
(Signed) JOSEPH ROMAN SERRANO, El Noticioso.

Mining Correspondence.

BRITISH MINES.

ABERLLYN.—John Roberts, March 5: There is no change in the underground department since last week with regard to the value of the lode in the various bargains. We have had a very large vugh on the hanging side of the lode in No. 2 level, lined with beautiful prian, something rather unexpected in so compact and hard a lode. We are expecting daily to communicate the winze in the bottom of No. 1 with No. 2 level. On the surface we are making good progress. I expect, however, that we shall be able to finish all the repairs which are necessary to the water-wheel by the end of this week. On Thursday we shall finish the erection of the 12 ft. water-wheel, and early next week we shall erect the driving gear for the jiggers. The jiggers are in a forward state, and I hope to finish them next week. We have 120 ft. of launders to make for the large wheel, which will be commenced as soon as the wheel is completed; I calculate that this job, with the making of stands and erecting, will take a fortnight from the time we begin it. In the meantime we shall have got on pretty well with the dressing-floors.

BETTWS-Y-COED.—H. T. Haley, March 5: To drive the 20 east of shaft, by four men, the month, at 40s. per fathom; the lode is increasing in size, and has more spar, worth for lead 12 cwts. per fathom. A rise in back of the deep adit by two men, at 60s. per fathom, worth fully 20 cwts. per fathom. A cross-cut south from deep adit, by four men, the month, at 60s. per fathom; the ground is of the most favourable character for the production of lead, and easy for driving. We have some good lead in the bin, the dressing and pumping machinery are working well, and the shaftmen are making good progress with the arrangements for the lift of pumps.

BLAEN CAELAN.—Jonathan Pelly, March 6: Everything is progressing satisfactorily. I have set six men to drive the 30 east along the hanging wall of the lode; bargains taken to remove stuff and pay all cost, at 7*l.* per fathom. The ground hard, and unfavourable for progress. Fixing lining in shaft will be done next week, enabling us to draw from the 30. The weather has now changed; we need not fear further stoppage to the pumping-wheel.

BODIDRIS.—H. Hotchkiss, March 5: There is no particular change in any part of the mine calling for special remark since my last. We are making fair speed at all points, and the character of the lode at the 45 is highly promising.

CLEMENTINA.—J. Roberts, Wm. Sandoe, March 5: We are glad to say that the heavy centre-pieces and axle of the water-wheel are in their place, and we hope that the erection of the wheel will go on without intermission. The loading of the bob at the top of the shaft is in a forward state, and would have been finished were it not for the bad weather these last few days. The capstan is made, and will be put up directly, and the work in the shaft will be put down whilst the wheel is being erected. The flat-rods are also being made ready, and everything else in connection with the new work is being got forward, so that there may be no waiting one thing for another. We have crushed most of the leadstuff, which is being cleaned for sale.

COMMMARTIN.—T. Harris, T. Comer, March 6: The lode in the north-west end in the counter lode is fully 5 ft. wide, composed of nice branches of friable quartz and mealy-looking killas, intermixed with small seams of beautiful silver-lead and veins of blende, but not enough for us to put a value on, but we think it will quickly improve again. We are evidently in a run of lead bearing ground, and we think that depth is only required to find it productive. About 6 feet behind the present end we passed through a nice little bunch of beautiful silver-lead, and we think it is the top of a shoot, and if we could sink below the adit level we would try it in depth, and it will be waste of time to attempt it now, but as the season advances we shall be able to sink several fathoms. The killas in the adit cross-cut has a very congenial appearance. The end east of adit cross-cut, on the new lode, is without change.

DE BROKE.—J. Phillips, March 5: The weather is now favourable for work, and our pumping and other machinery going on regularly. I shall be prepared to sample 12 tons of lead ore by Friday or Saturday next. The stopes, on the whole, are producing very fair quality orestuff, and look encouraging. I expect the water will be out of the 55 by Saturday, and to set a bargain to resume driving the level east of Wilson's engine shaft.

DENBIGHSHIRE CONSOLIDATED.—R. Prince, A. Francis, March 6: The new joint in the 112 east shows a nice rib of lead, mixed with spar, and we have every reason to believe it to be a fresh lode or branch coming in from the south side of the vein we had been driving on.—Western Workings: It has taken us a long time to clear the levels of the accumulated stuff, but we are now able to place men upon the ore ground opened out between the 66 and 80, and the result has been very gratifying. Some of the rocks of solid lead taken out weigh 1 and 2 cwts. We have proved the ground now for some yards, and feel confident that this will turn out the master lode of the mine, from which we ought to get hundreds of tons of lead ore.

D'ERESBY CONSOLS.—John Roberts, William Sandoe, March 5: The lode in the end, driving towards Cobbler's lode, seems to be rather improving; that is to say, it is becoming softer, and in consequence likely to become more valuable for lead, and will enable us to make greater progress in driving. It is letting out water more freely than it has done for some time, which leads us to think that we cannot be far off from the Cobbler's lode.

D'ERESBY MOUNTAIN.—John Roberts, W. Sandoe, March 5: Monthly Report:—In the No. 1 we have put two extra hands to push it in to get under the old workings at surface, where the old people extracted so much lead. The end is a little more orey than last week. No. 2 end is slightly improved; the lode is more compact, and containing strong spots of lead. The sump at this level is being cleared up by two men, and is now down about 8 ft. The rise at No. 3 is without any change since last week; the lode is large and very kindly, and being orey in the bottom of the workings at No. 2, we might expect a good change any day. We have communicated the Gorse shaft with No. 4 level, and shall complete timbering, &c., down to that point in three or four days, after which we shall prepare the shaft below for winding from the bottom or No. 5 adit. We hope to get this arrangement ready, with the engine and winding gear, in three or four weeks from the present time. A great part of the time during the past month the men in the stope at No. 4 have been engaged breaking up the massive rocks for tramming. In No. 5 since we have put up the horse pulley we have been making better progress, and shall continue to do so. We have now cleared 33 fms. from No. 3 shaft, and have 57 fms. more to clear to reach up to Gorse shaft. If we shall be able, as we calculated to do, to clear from the other end with the engine, we think to complete this in three or four months. We are adding to the stock of dressed lead daily, and the machinery continues to work well.

DEVON GREAT CONSOLS.—Isaac Richards, March 5: Wheal Emma, Inclined Shaft: In the 137 east, west of Friend's cross cut, the lode is 2½ ft. wide, composed of capel, quartz, and a little of both mundic and copper ore. In the 47 west, the lode is 5 ft. wide, consisting of capel, quartz, prian, and copper ore; worth 2 tons or 6*l.*, and 3 tons of mundic per fathom.—New Shaft, New South Lode: In the new shaft, which is now down about 13½ fms. below the 190, the ground continues favourable for sinking, and good progress is being made. In the 190 east the lode (5 ft. of which is being carried) presents a fine appearance, being composed of very fine capel, quartz, peach, prian, fluor, and copper ore; worth 8 tons or 24*l.*, and 6 tons mundic per fathom. In the 190 west the lode part carrying (5 ft. wide) is composed of capel, quartz, peach, and copper ore; worth 3 tons or 9*l.*, and 5 tons of mundic per fathom, and an early improvement is expected. In Hockaday's winze, in the bottom of the 190 west, the lode is worth for length of winze (9 ft.) 4 tons of copper ore or 12*l.*, and 6 tons of mundic per fathom. In Floyd's winze, in the bottom of the 175 east, the lode is worth for length of winze (9 ft.) 6 tons of copper ore or 18*l.*, and 5 tons of mundic per fathom. In the 175 west the lode has much improved, and presents a very fine appearance, being composed of capel, quartz, peach, prian, and copper ore; worth 6 tons or 18*l.*, and 3 tons of mundic per fathom. In Hockaday's rise in the back of the 175 west, no lode has been taken down since the last report. The value where last seen, for length of rise—9 ft.—was 4 tons of copper ore, or 12*l.*, and 4 tons of mundic per fathom. In the 130 east the lode is 2½ ft. wide, composed of capel, quartz, mundic, and a little copper ore of good quality. The Railway shaft is down 8½ fms. below the 160. The lode having taken a greater underlie, is now altogether to the south of the shaft, sinking is, therefore, being carried on in the country, which is favourable, and good progress is being made. We sampled on Friday last 847 tons 2*l* cwts. copper ore for sale on the 20th inst.

DUBBY SYKE.—W. Vipond, Feb. 28: The drift east from rise is driven on the vein 5 fms. 4 ft. The barytes still continues, and there is a little more clay on the Sun cheek of vein, but no ore to value. The men have been partly squaring up the drift the last few days. Of course they will leave off now until the sinking is decided about.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., March 1: The south part of the lode at the 117 east, both east and west of cross-cut, is showing a very kindly appearance, producing mundic and ore to the value of 8*l.* per fathom. The lode in the 105, west of cross-cut, is carried 6 ft. wide, yielding very strong arsenical mundic with good stones of ore, worth 6*l.* per fathom, and showing indications of improvement. The lode in the stopes below the 105, west of winze, is worth 8*l.* per fathom. The lode in the stopes in the same level, east of said winze, is worth 12*l.* per fathom. All other points are without change.

GLASGOW CARADON CONSOLS.—Wm. Taylor, Wm. J. Taylor, March 3: We have not cut any more lode in the 102 cross-cut, but we have met with a cross-course which has no doubt somewhat disordered the lode, and we believe we have the main part further south. The ground is still favourable, and letting out water, and we are pushing on the driving as fast as possible. In driving north from the 90 west we have better ground, and about 2 fathoms to reach the north lode, which will communicate with the winze from the 78 on that lode. The lode in the 90 east is just the same. We are now within 4 or 5 ft. of the No. 1 winze, to which we expect to hole in a few days. We have put on a pare of men in the winze to sink it through. When this is holed we expect an improved lode for driving, and we shall then be able to cross-cut south. We think the main part of the lode is standing there. No. 2 winze in the bottom of the 78, in which we have a good lode, we are obliged to suspend until the 90 east is further advanced. No other change to notice. The stopes and pitches throughout the mine continue to turn out their usual qualities of ore, varying in value from 10*l.* to 30*l.* per fathom. Our next sale of ore will be (computed) 190 tons, which will be sold on the 20th instant.

GORSEDD AND MERLLYN.—March 6: The 70 east is now being driven by six men, and since last report they have advanced 2 yards. I think we shall have a good course of ore here. The 70 west is being urged forward by six men, and they have driven 2½ yards since last report, and I am glad to say the lode is improving. The stopes and tribute pitches look very well, and from present appearances I shall be able to send you good news in a day or two.

GREAT HOLWAY.—March 6: The surface operations are proceeding in a very satisfactory manner. The portable engine over Garden shaft works well. The 55 east is now being advanced by six men, and I am glad to say the lode is well-defined. Towards Office shaft west I find that the lode has been missed in former times, and we have cut into rich lead and blende ores, and have a very good opinion of this part of the mine. We have raised during the week some splendid rocks of lead ore.

GREAT LAXEY.—W. H. Rowe, Feb. 26: Having made a most minute examination of the leading points of working in both sections of the mine since my

report of last week, I beg to inform you of the following improvements:—The lode in the 220 end north is now evidently clear of the nip, and improving in value; now worth 20*l.* per fathom. The 210 has been recently resumed at 10*l.* per fathom. There is a marked improvement in the 215 north of Dumbell's shaft; lode worth 40*l.* per fathom. The 110 end north continuing into entirely whole ground to surface; worth 20*l.* per fathom. We have driven a few fathoms northward on the course of the lode in the 125 cross-cut without making any discovery of importance, but it will be very desirable to open upon it southwards as well, in which direction I have great confidence something of importance will be found.

— F. Reddicliffe, March 4: Deep Mine: As yet the lode in the bottom of Welsh shaft affords nothing good to report; the lode and ground about it continues to be congenial, but with very little ore. The 247 end north of this shaft has not yet touched the first run of ore, which we expect it now to be getting near to. In the 235 end north, after cross-cutting a short distance to prove the full width of the lode, and finding nothing more of importance, we are now driving north again; the lode is worth 5*l.* or 6*l.* per fathom. A winze sinking in the sole of this level is worth 18*l.* per fathom. The three stopes working in the roof of this level are worth 16*l.*, 20*l.*, and 18*l.* per fathom respectively. The lode in the 220 end is worth 25*l.* per fathom, and we doubt not it will now go on a long distance in rich ground. The winze in the sole of this level has improved, and is now worth 16*l.* per fathom. There are two stopes in the roof of this level, one worth 16*l.* and the other 20*l.* per fathom. The 210 end is a little improved, its present value being 12*l.* per fathom. There are two stopes in the sole of this level worth 12*l.* and 18*l.* per fathom respectively. The joint rise and stope in the roof is worth 16*l.* per fathom. The joint rise and stope in the 200 is worth 20*l.* per fathom. Two stopes in the sole of the 180 are worth 18*l.* per fathom for each. —Dumbell's: I regret to say the water has not yet been drained from the bottom of this shaft, and as it is now even more uncertain when such will be the case we must at once adopt some means of disposing of it. The lode in the 215 end north is worth 30*l.* per fathom. In the end above this (the 200) the lode is large, and yesterday showed a little ore; a little cross cutting is necessary here to prove the whole lode, and will probably be commenced next week. The two stopes in the roof of this level south are worth 15*l.* and 12*l.* per fathom respectively. A short cross-cut is being put out eastward in the 185 north, as there seems to be a branch of the lode standing in that direction. The cross-cut is in extremely hard ground; the three stopes in roof of this level will average 16*l.* per fathom. The 170 end has been producing a little ore, and is looking much more kindly during the past week. The 140 end is also looking quite promising, and the lode well filled with spots of ore. About 5 fms. have been driven north on the east lode in the 125 cross-cut, and in the end the lode does not underlie so much as where first seen, but otherwise there is no change. The lode in the 110 end is worth 20*l.* per fm. There is no alteration in the 85 end or the end over the 110, between Welsh and Dumbell's shafts.—South Ground: The value of the pitches working in this part of the mine is as follows:—Stope in roof of 165, 16*l.* per fathom. Stope in roof of 155, 12*l.* per fathom Stope in sole of 140, 10*l.* per fathom. Joint sink and stope in sole of same level, 15*l.* per fathom. Stope in roof of 90, 20*l.* per fathom. Nothing met with in the 80 cross cut as yet.

GREAT RETALLACK.—J. Harris, March 1: I have to-day set the four men a bargain to drive across the lode to the footwall at the bottom of the boundary shaft, or down upon the water, at 20s. per fathom, the men to pay the cost of drawing their stuff. I do not think we have more than 5 or 6 fms. to drive to reach that point, and it is on the footwall of the lode we look for the deposits of blende.

GREEN HURTH.—W. Vipond, Feb. 28: We have made both ends of the sump ready for driving off, and began yesterday to drive north. We could not begin them both so near the end of the week, and get them securely timbered, which they certainly require close to the sump. The north end is yielding 4 tons of ore per fathom; this is in a width of 4 ft., and we have no cheek on either side in this end, better ore still seemingly going down in the sole. I cannot say much yet about the other end, as it is not fairly into the orey part of the vein. A good deal of the horse of rider met with in sinking is in the end yet, and when we begin driving we shall have to bear a little to the east to clear it, and get more into the vein. There is no increase of water. The total depth of the sump is now 76 ft. 6 in. We sunk last month 2 fms. 6 in. We have nearly worked out the ore we had last week in No. 2. We had a nice quiet thaw set in yesterday, but no rain. The snow is wasting pretty fast. We are preparing to start the pumping-wheel this morning, and if the frost keeps away we shall get the dressing started on Monday.

HARWOOD.—W. Tallentire, Feb. 28: Herdship Level: North End Ore Bargain: There is no alteration with the vein; it is 6 ft. wide, with bunches of lead ore throughout its whole size. Something like 2 fms. in length has been taken out this month. The vein is hard and twisted at present, or else the men would have made good wages, even with the quantity of lead met with per fathom.

HERODSFOOT.—P. Temby, March 5: On Saturday I set the following bargains:—The shaftmen to rise over the 160, on the course of the lode, for the new shaft at 60s. per fathom; the lode is of a very promising character, containing mundic and good spots of lead ore. The 205 to drive south, by six men, for the month, at 7*l.* 10s. per fathom; the lode is worth 20 cwts. of lead per fathom. No. 1 stope in the back of this level, by six men, at 35s. per fathom; the lode is worth 15 cwts. of lead per fathom. No. 2 stope in the north end of south winze, by six men, at 35s. per fathom; lode worth 10 cwts. of lead per fathom. No. 3 stope in the back of the 205, by four men, at 35s per fathom; the lode is worth 7 cwts. of lead per fathom. The 190 to drive north, by two men, at 65s. per fm.; the lode is 2½ ft. wide, highly mineralised, and daily improving, now producing saving work for lead. This point of operation is of great importance, and will soon prove the north ground at a great depth. The 190 south is cleared and secured, so that we may commence driving there at any time. The dressing is going on steadily, and we are preparing a parcel of ore for the market. The new wire ropes are on the mine, and we hope to get them working in a few days. The masons have commenced building the new smith's shop; when this is completed we shall then fix the weighbridge.

LADYWELL.—A. Waters, March 6: The new south shaft is now 9 fms. 1 ft. below the 16, and is at present going down by the side of the lode in a clean blue slatey rock, which is laced and interlaced with strings of spar and lead ore. My opinion is that when we cross-cut the lode at the 32 good ore ground will be met with. The winze below the 16, south of said shaft, is down 13 fms.; lode yielding solid lumps of ore in soft ground. We shall be down to the 32 here by the end of next week. The 16 south continues to open out a good looking sparry orey lode, worth at present 1¼ ton of lead ore per fathom; this run of ore is now uncovered for about 11 fms. in length, and I hope to get into it in the 32 south from the above-named winze in course of the next two months. I would remark here that the said 16 end is south beyond any other point in the mine is going away in a straight line towards the old Bog Mine, there being from 230 to 250 fms. still between the end and the junction of the shale. We have delivered the 40 tons of lead ore sold to Messrs. Walker, Parker, and Co.

LLANRWST.—Robert Knapp, March 5: The lode in the adit end is looking much better; the north part, which had been left standing behind a horse some distance back, appears to have come in again, cutting out the horse entirely, and making, in conjunction with the other part, a very fine lode, although the whole of the north part has not yet been cut through. This will be done as we advance with the driving, so as to afford an opportunity for breaking down the side. The lode in the 14, east of Endean's, is also looking better, though it is not rich, but a very pretty looking lode, yielding, probably, ¾ ton of lead ore per fathom, which, with the easy ground there is there for working, will pay a good profit on the working. I am almost sure the winze from the adit is not coming down on the same part. In the lode in the 14 there is no mundic, and in the winze—which is now down nearly 10 fms.—there is a great deal; besides, the spar is not of the same kind in the winze as it is in the end. I shall, in all probability, dial up the levels to-morrow, and afterwards shall be able to state with comparative certainty whether it is so or not. If my ideas in this respect turn out to be correct it will add immensely to the value of the mine.

LLANSAWEL.—March 5: In the No. 2 adit the ground is becoming settled, with every appearance of a productive lode forming on the north, indicating the main lode is in that direction. In the No. 3 adit in the 8 fathom level below there are several branches running into this lode. The end to-day is worth 25 cwts. of dressed lead per fathom.

MELLANEAR COPPER.—John Gilbert, March 5: The 30, of west Gundry's shaft, was driven 5 fms. 5 ft. last month; the lode is 3 ft. wide, and worth 2 tons of copper ore per fm. The 40, west of Gundry's shaft, was driven 2 fms. 3 ft.; the lode is 2 ft. wide, and producing a little saving work for copper ore, and getting more promising in appearance. The 50 fathom level, west of Gundry's shaft, was driven 3 fms. 0 ft. 4 in.; this level is suspended for the present, and the men are put to rise in the back of the 60, west of shaft, and a little in advance of the 50. The 60 fm. level, west of Gundry's shaft, was driven 1 fms. 3 ft; the lode is 2½ ft. wide, but very much disordered, now worth 1 tons of ore per fathom. But we think there is another part of the lode standing further south, and we shall put the men to cross-cut for a few days in that direction. The 70, west of Gundry's shaft, was driven 4 fms. 4 ft.; the lode is 5 ft. wide, and improved to 3½ tons of ore per fathom, and the ground is also very much easier for driving. The 80, west of Gundry's shaft, was driven 5 fms. 4 ft.; the lode is 5 ft. wide, and worth 2½ tons of ore per fathom. The 90, west of Gundry's shaft, was driven 6 fms. 2 ft.; the lode is 3½ ft. wide, and worth 4 tons of ore per fathom, and producing a large quantity of saving work for blende, and letting out a good deal of water; so much so, that it has completely drained all the levels above. The 100, west of Gundry's shaft, was driven 6 fms. 2 ft.; the lode is ¾ ft. wide, producing a little ore, but not sufficient to value, but looking promising to improve very soon. The 100, east of Gundry's shaft, was driven 4 fms.; there has not been much change in the value of the lode in this level for the last 20 fathoms driving; it is still worth 1 ton of ore per fathom. The 100, west of the skip-shaft, was driven 11fm. 2 ft. 6 in.; the men have done but very little in this level for the past month, but as soon as the water abates a little at the old engine we shall cut through the cross-course as quickly as possible. The 70 cross-cut, south of the skip shaft, was driven 5 fms. 2 ft. 9 in.; the ground is improved for driving, and the men have made very good progress during the past month.—Gundry's Shaft: The shaftmen have put in the bearers and cistern at the 100 for the new 20-in. plunger-lift, and we expect to-morrow to send down the H-piece and the wind-bore. The rise in the back of the 60, west of Gundry's shaft, was put up 1 fm. 3 ft.; the lode is 5 ft. wide, and worth 3 tons of ore per fathom. The rise in the back of the 70, west of Gundry's shaft, was put up 1 fm. 4 ft.; the lode is 5 ft. wide, worth 2½ tons of ore per fathom. The winze in the bottom of the 90, east of Gundry's shaft, was sunk 3 fms. 1 ft. 6 in.; the lode is 4 ft. wide, and worth 3 tons of ore per fathom. We set 10 pitches to 31 men, at an average tribute of 7s. 6d. in 1*l.*

MINERAL CORPORATION OF GREAT BRITAIN.—W. Bennetts, March 6: HAFNA AND HIGH HAFNA MINES: Setting Report: No. 3 adit end is let to four men, 2 fms. stent, at 140s. per fathom; the lode is worth 1½ ton of blende to the fathom, with a good mixture of lead. No. 2 rise in back of No. 3 adit, is let to six men, 3 fathoms stent, at 130s. per fathom; lode worth 2 tons of blende and 15 cwts. of lead to the fathom. The following ends were not let on Saturday—Nos. 2 and 4 adit ends—as the men are now engaged in clearing off the ground for the engine and compressor to work the drill machines, which are to be applied to the two above-named levels.

GREAT D'ERESBY MINE.—We have suspended the driving of No. 5 adit level for the time being. We are now preparing the foundation for the engine and compressor, so as to be in readiness by the time the drill machinery arrives.

BRYN CANADON MINE.—There is nothing new to report here. The men are busily engaged in clearing the different levels.—Surface: We are getting on well with the embankments for the new reservoir. The same remark will apply to the men engaged in taking out ground for wheel pit. I am pleased to say that we have met with some good solid lumps of lead, which leads me to think that we are near the back of another lode; this we shall see more of as we get deeper. The walls of the office will be completed to-morrow, when we shall at once commence putting on the roof.

MORFA DU.—T. Mitchell, March 6: Operations at the various points are going on very well. The lode in the back of the 48, which was pinched up rather small a few days ago, is beginning to open out wider again, and we hope soon to see the lode at its former width and productiveness.

NEW BRONFLOYD.—Thos. Kemp, March 6: Setting Report: Middle Lode: Four men to continue the 73 end, west of Curtis's cross cut, at 160s. per fathom, including the removal of stuff. The north part of the lode carried by this driving is still without any material change to notice, being composed of killas and spar, strongly intermixed with lead ore, looking very promising. The new air machine works well, and answers the purpose required. Two men to further extend the 52 end, east of No. 2 shaft, at 100s. per fathom, including the removal of stuff. The ore bearing part of the lode here is about 4 ft. wide, principally killas, carrying nice strings of ore of a very favourable description, in ground easy for progress. Four men to continue the winze under this level, at 140s. per fathom, including the removal of stuff. The north part of the lode carried in sinking is for the present somewhat disordered by cross-joints, but at times excellent stones of ore are being met with. The 25 tons of silver-lead ore sold to Messrs. Sheldon, Bush, and Co. on the 20th ult. realised 10*l.* 7s. 6d. per ton. Hauling and dressing are going on regularly, and every effort is being made to get another 25 tons marketable at the earliest date possible. Machinery in good working order.

PANDORA.—H. Nottingham, March 6: I have no particular change to report this week. The 33 north, on Goddard's lode, is now worth 1 ton of lead per fm. The other bargains throughout the mine are equal to last week's report. At surface I am pleased to say we are getting on satisfactorily, and have the best quality stuff we have yet seen come up from the mine.

PARYS MOUNTAIN.—T. Mitchell, March 6: The ground in the 90 south is getting harder than it has been for some time; it is still intermixed with sulphur, and producing occasional stones of copper ore. The 90, east of cross-cut, continues in lodey ground, and showing small branches of copper ore. The forebreast has a kindly appearance.

PATELEY BRIDGE.—C. Williams, March 6: The Rake vein, in the 30 east, is opening out very satisfactorily, being from 7 to 8 ft. wide, and worth 12 cwts. of rich lead ore per fathom, and the present appearance of the vein altogether is such as to warrant its soon developing into a rich ore body; driving by six men, at 80s. per fathom. The vein in the stope in the back over this level is 4 ft. wide, and worth 15 cwts. of ore per fathom; working by four men, at 45s. per fathom. In sump winze, sinking below the 30, we have fixed the 6 in. lift of pumps, and resumed the sinking; the vein in the bottom is 6 ft. wide, carying a leader of lead ore in the south wall 3 ft. thick solid, and worth 10 tons per fathom. The Lumb vein, in the 20 west, is 8 ft. in width, consisting of spar, gossan, and lead ore, worth of the latter 1 ton per fathom; working by four men, at 4*l.* 13s. 9d. per ton of dressed ore. Fielding's vein, in the 20 north-west, is 3 ft wide, and worth 18 cwts. of lead ore per fathom; working by four men, at 5*l.* 6s. 3d. per ton of dressed ore. Tribute pitch on string in the 20 east is worth 12 cwts. of lead ore per fathom; working by two men, at 5*l.* 12s. 6d. per ton for dressed ore. Tribute pitch on string under the 20 east is worth 14 cwts. of lead ore per fathom; working by four men, at 5*l.* per ton for dressed ore. A metal bargain on surface to dress waste, to two men, at 3*l.* 15s. per ton for clean ore. We sold on Feb. 19 30 tons of pig-lead for 375*l.* We have 13 tons of pig-lead on hand smelted, and hope to have another 12 tons ready by the pay-day. The new boiler arrived on the mine on the 4th instant, and it looks a first-class piece of machinery. The pumping and drawing machinery is working very well.

PENNANT.—March 6: I am glad to say the rise in the 40 west is turning out nice lead ore, and seems likely to continue to give good returns. I have placed four men to continue the driving on the main level, and expect to announce good results. We are dressing the lead ore.

ROMAN GRAVELS.—Arthur Waters, March 6: The shaftmen are engaged fixing bearers and cistern, and going on with the necessary work for three plunger-lifts in the new south engine-shaft. The 110 north of caunter, north of shaft, is going forward in a strong wide lode, worth 2½ tons of lead ore per fathom. The winze below the 95 north, coming down on the said end, is worth 3 tons of lead ore per fathom. The 110 south is up to a cross joint, which has disordered the lode for the present, there being no ore to value in the forebreast. The 95 south is worth 2 tons per fathom. The 80 south is through the twitch into a strong lode again, worth 1 ton per fathom. We may expect to go forward here into a long run of ore ground. The winze below the 65 south (about 10 fms. in front of the present 80 end) is down about 10 fms.; lode worth 2½ tons per fathom, there being 5 to 6 ft. of lode standing on the west side worth 2 tons per fathom. The 65 south is going forward on the hanging side of the great lode, there being two ore courses in sight, each worth 2 tons per fathom. The 40 south is worth 1 ton per fathom, and promising for further improvement. The stopes throughout the mine are yielding the usual quantities of ore. We have this week delivered 100 tons of lead ore to the respective buyers.

ROOKHOPE.—T. Tonkin, March 6: Adit Level: The ore ground is now reached here, and in a day or two we shall be in shape for getting out ore; the appearance of the ground for several fathoms in length is good, and will yield above 1 ton of ore to the fathom. This branch of ore is near the footwall of the lode, a fact which augurs well for the future, as the ground near the walls of the lode stand almost intact through the whole mine. The calcite which forms the gangue is of a decomposed nature in places, and well tinged with gossan. In the 15 fm. level the drivage east from the cross-cut, near Low shaft, from the friable nature of the gangue, is good to work, and worth 8 cwts. of lead ore per fathom. The drivage westward continues stiff, and is worth 9 cwts. of ore to the fathom. In the 25 the stopes in the rise near Low shaft are worth about 10 cwts. of ore to the fathom, and the ground, too, is moderately easy. The drivage west from Low winze is worth 9 cwts. of lead ore to the fathom, and we are making fair progress, having the advantage of a good flookan leader on the north side of the ore, producing calc spar. In the Pump sump, near Gin shaft, the drivage is worth about 9 cwts. of lead ore to the fathom, but the ground is stiff and the progress slow; I expect, however, we shall shortly reach better ground for driving. The cross-cut from the winze near Low shaft has not changed in character or appearance since last reported on. In the 42 the stopes in the rise near Low shaft are worth about 9 cwts. of lead ore to the fathom, and we are getting ourselves in shape for a longer stretch of operations. The stopes in the rise near Gin shaft, just recently commenced, are of a promising character, and yield paying work. The exploratory operations also near Gin shaft, on the east, promise good results.—Dressing Operations: The weather is better, and we are, therefore, in a more satisfactory position with regard to our washing. The care bestowed on the work before going to the crusher has also a very salutary effect. The machinery is in good working order.

SOUTH DARREN.—Henry James, March 6: We are making good progress in forking the water, and expect soon the men will be able to resume their bargains in the 90; in the meantime I have put some of the men who are not able to get at their bargains to stope in the roof of the 80 in order to have sufficient orestuff to keep on drawing and dressing regular day and night. The lode in the 80 end is worth 15*l.* per fathom for lead and copper ores, and the two stopes in back are worth on an average 20*l.* per fathom for lead and copper ores. The new shears is being put up over the engine-shaft, and we are in course of putting some new sets of timber in top of the shaft, which is at once absolutely necessary for safety, the old ones being rotten, and giving way. The orestuff in the 80 and above is not so rich for lead as in the deeper levels, and we have to treat with a larger quantity to make up our usual samplings; however, we have plenty of fair average orestuff for the crusher, and are making good progress. The copper ore sold on the 28th ultimo realised 22*l.* We sampled last Saturday 25 tons of silver-lead ore for sale to-morrow.

SOUTH MOLTON CONSOLS.—T. Harris, T. May, March 6: There is no particular change in the nature of the ground in the adit cross cut since we last advised you, but we will particularise more in our setting report on Saturday next.

TAMAR SILVER-LEAD.—R. Goldsworthy, March 5: Saturday last being pay and setting the following tribute pitches were set:—A pitch in the back of the 57 south, by four men, to raise fluor-spar, at 9s. per ton, best quality, and 5s. per ton for seconds. Two tribute pitches in the bottom of the 27 south—these are each set 8*l.* per ton for silver-lead ore, 9s. per ton for best fluor-spar, and 5s. per ton for seconds. We have cleared and hope to finish securing the 37 south in a few days. The ore-bearing part of the lode in the breast of the ground is about 1 ft. 6 in. wide, a very promising lode, producing good stones of lead. Seeing we have a good lode gone down in the 27, which is 20 fms. in advance of the 37, when this end is driven out, it can scarcely fail to lay open some valuable ground.

TANKERVILLE.—A. Waters, March 6: Watson's engine-shaft is now 11 fms. below the 206, and the country rock of a congenial character. The 206, west of shaft, is driven 16½ fathoms, and we think the end is now entering the western run of ore ground; the lode is now 3 ft. wide, worth 1 ton of lead ore per fathom, and improving. The 206, east of shaft, is driven 27 fathoms on a lode, varying in value from 2 to 6 tons of lead ore per fathom; present value of the end being about 4 tons per fathom. The eight stopes in the back of this level, east and west of winzes, east and west of shaft, are worth together about 13 tons of lead ore per fathom. No change in the winze below the 192 west since last week. The stope in the back of this level west is worth 1½ ton per fathom. The 182, east of shaft, is worth 1½ ton per fathom. The stope in the bottom of the 140 west is worth 1½ ton per fathom. We shall this week let 15 pitches to 34 men, at an average tribute of 4*l.* 15s. 8d. per ton of dressed ore. We shall sample 100 tons of No. 1 quality lead ore on Thursday next.

TEESDALE.—John Slack, March 1: West End Forehead: There was a little more lead ore in this working since I last saw it, and which continues up to the present, though it was much harder and slower to work. The little ease they had at the roof has disappeared altogether; the best of the ore still continues in the roof of the level, and I think the vein upon the whole seems to cling more kindly to the west cheek, a feature I am rather pleased to see.—West End Stope: There has been a little change in this working since my last, the vein became suddenly poor towards the lower part immediately over the level roof; it, however, only remained so for a couple of days, and is now regaining its old position. I expect we shall have it very much richer than it has ever been between where we now are and the level forehead. Most of the ground in this stope for the last eight or ten weeks must have averaged close upon nine bings per fathom. West end stope at a higher random, the two men set on to try the east branch of the vein found the plat of such a hard ridery nature that it was nearly impossible to get a drill tempered to stand it. I stopped further operations, and set the men on carrying another thickness of the stope immediately behind the other men; from the unnatural character of this plate I am of opinion it is only temporary, and we shall get to the end of it by continuing forward, where no doubt we can get up much cheaper.—Dressing: Nothing has been done, but I expect a start being made to-day permanently for the season. A few days work will enable us to get plenty of lead away for next pay.

TEMPLE.—John Croucher, March 5: I am happy to report that on an inspection of the various levels I find the improvement we had anticipated generally realised. The No. 1 level now looks again much better; there is a good leader of lead here, which may be fairly estimated at 12 cwts. to the fathom, and as the lode is not entirely cut down it may prove still better in the forebreast, which shows very favourably for further improvement. The men cut 14¼ ft. last month. The No 2 level shows a very promising appearance so far as the lode has been cut down. The lode is several inches wide in the bearing part, with one good leader from top to bottom, and several cross bands of ore. It may be safely estimated as worth 1 ton to the fathom, is most productive at the bottom, and will probably show considerable improvement when next cut down; 17 ft. were driven here last month. The lead produced in the above levels is of excellent quality, well mixed with spar, but quite free from either sulphur or blende. The ground in the No. 3 has become generally harder; the blende has gone out, and though we have no lead just now the improved ground, and especially the presence of a good band of calc spar, indicates the near approach to a more productive part of the lode; the men drove 21 ft. last month. The milder weather has enabled us to make better way with the erection of the machinery. We have been obliged to more a part of the pile of ore to make a place for the launder running from the picking-table to the round buddles and slime pits, but Capt. Davies knows that no unnecessary work is to be undertaken.

WEST ASHETON.—Joseph Garland, March 5: Boundary Shaft: The driving of the 40 west has been resumed; the main part of the lode is 2½ ft. wide, and yields at present 1½ ton of lead ore per fathom. A stope has been started in the back of this level, over Jones's late pitch; the lode produces 4 tons of lead ore per fathom. The 50 is advancing speedily, and good tribute ground is being laid open. The lode is disordered and poor just now, but we think an improvement may soon be looked for. A new pitch has been set in the back of this level, adjoining to and west of Jones's late pitch. The lode in the end of the 60 has an improved appearance so far as cut into, and yields good stones of lead ore. The pitches in the back of this level, of which there are now five working, have somewhat fallen off in value. We anticipate that the driving of the 40 and 50 fathom levels west, which should be forced on uninterruptedly, will lay open a great deal of productive ground.

WEST TANKERVILLE.—Arthur Waters, March 6: The 86, south of shaft, is now up to a point where the lode is split into three divisions, each of which contains a little lead ore and blende, but at present not sufficient to value. I calculate that we have about 10 fms. further to drive this level to reach the ore ground seen in the upper levels. There is to-day a change of ground for the better in the forebreast, and the price for driving next month will be 5*l.* per fathom. We hope, therefore, to make greater progress than hitherto. The 75, south of shaft, is driven about 57 fms., and is about 15 fms. beyond the 86 end. We suspended the 75 south several months ago, not because there was no hope of success, but at the request of the directors to reduce the cost. It is my opinion, however, that by extending said level we shall find not only the main lode productive, but also Lawrence's lode, which has made rich bunches from the 6 down to and below the 63, towards the junction of the shale. These remarks apply likewise to the extension of the 86. A pitch to be set this week to four men, about 5 fms. above the 75, and about 41 fms. from shaft on Lawrence's lode, is worth 4 tons of lead ore per fm., the tribute fixed being 2*l.* per ton, tributers paying all cost, including 1*l.* per ton for dressing. This run of ore is found standing on the west side of the old stopes in the back of the 75, and as far as we can see is going forward over the 75 end. We have now opened upon it for about 3 fms. in length, the end going south as well as the lode in back and bottom of the drivage being worth about 4 tons lead ore per fathom. The yield from this pitch for the month ending to-morrow will be about 12 tons of rich lead ore. We are preparing to cut into the west side about 15 fms. further south than the point named. Tribute pitch in bottom of 63 south, on main lode, will be set to four men, at 4*l.* per ton. Pitch in back of the 75 south, about 10 fms. behind the end, to four men, at 4*l.* per ton. Pitch in bottom of the 50 south to four men, at 3*l.* 10s. per ton, or 20s. reduction from last month. We shall have 9 pitches altogether by 28 men. Some of the tributes will be settled to-morrow. We have to-day sampled 20 tons of blende, and shall sample 30 tons lead ore next week.

WEST VOR.—S. Harris, March 6: I have been underground this morning, and find the lode in the adit level, east of cross-cut, to be fully 5 ft. wide, producing a little more tin, and from its appearance I am daily expecting a further improvement. We are driving by four men about 2 fathoms per month. Our tributers will sell their tinstuff next week.

WEST WHEAL PEEVOR.—W. T. White, March 6: It is with satisfaction that I can report favourably on the work carried on. The men are doing their best in sinking Michell's engine-shaft so as to accomplish their contract of 10 fms. in the specified time. The ground appears daily to be getting into a more settled condition, and possesses every indication for the production of mineral.

WEST WHEAL TOLGUS.—March 6: The 155 is now about 5 fms. west of Taylor's shaft, and we have intersected the main part of the cross-course, and cut into it about 2 ft., and find it to be composed principally of white iron. We expect to get through it and see the lode in a few days. In the 145, west of shaft, the lode is 4 ft. wide, yielding 2 tons of ore per fathom. In the 145 east the lode is 1½ ft. wide, producing stones of ore, and looking a little more promising. In the No 7 winze, under the 125, the lode is 2 ft. wide, and worth 2 tons per fm. The stope in the back of the 145, west of No. 4 winze, produces 2 tons of ore per fathom. The stope in the back of the 145, east of No. 2 winze, will yield 2 tons per fathom. A stope in the back of the 145, west of No. 3 winze, will produce 5 tons of ore per fathom. A stope in the back of the 145, east of No. 1 winze, is producing 4 tons per fathom. A stope in the back of the 145, west of No. 1 winze, will yield 3 tons per fathom. A stope in the back of the 135, west of cross-course, yielding 2½ tons of ore per fathom. A stope in the back of the 145, east of No. 3 winze, is worth 2 tons per fathom. A stope in the back of the 135, west of No. 5 winze, is worth 2½ tons per fathom. The lode in Richards's shaft in the 93 west is 2 ft. wide, and producing a little saving work for copper ore. The mine is in fork throughout, and the water is beginning to abate a little in the shallow levels.

WHEAL UNY.—W. Rich, Matthew Rogers, March 3: The lode in the 172, west of Hind's, carries low-quality tinstone. The 160 end, east of Goodinge's shaft, is in easy ground, but the lode is poor. The rise in the 180 west is worth 9*l.* per fm. There is nothing new to note in the 150 cross cut north. The 130 end west carries stones of tin. We have began to drive the 130 end, east of King's, on the north part of the lode. The stope in the back of the 60, west of incline-shaft, is worth 10*l.* per fathom.

WHEAL GRENVILLE.—T. Hodge, March 6: Goold's shaft is down the required depth for the 165 fathom level; it will take this week to square the ground to the bottom, but this done we shall commence to drive both east and west. The 150 east end is worth 8*l.* per fathom, and likely to improve. The 140 east end is worth 8*l.* per fathom. No other changes.

FOREIGN MINES.

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Rio de Janeiro, March 1: Produce eight days, second division of February, 10,500 ozts.=4048*l.*; yield, 6·3 ozts. per ton.—Advices from Morro Velho, dated Feb. 9, report all going on well.

RICHMOND CONSOLIDATED.—Telegram from the mine at Eureka, Nevada: Week's run, $60,000, from 1236 tons of ore. Week's produce of refinery, $40,000.

— R. Rickard, Feb. 13: Since my last work in the mine has been carried on with usual regularity. The 400 on quartzite has been extended 15 ft. without any material change. The 400 drift from end of cross cut, has been extended 15 ft. in broken ground, with a little ore. A rise has been started in back of this level, and is up a distance of 11 ft. The present top of the rise is in limestone; work in this rise will be suspended for the time being until the drift is further advanced. The intermediate level below No. 12 chamber has been extended 39 ft., and is now holed to the chamber. The 600 drift south, on fissure, has been extended 34 ft.; the ground is looking more favourable for ore. The 800 north cross cut has been drifted 35 ft. The ground is more favourable for drifting. The 900 west drift has been extended 16 ft., without any material change in the ground. The 900 north cross cut has been drifted 20 ft., and a rise started from the end to connect with winze sunk below the 800; as soon as this connection is made the drifting of the cross cut will be resumed. The chambers are all much improved since last week, and the grade of ore is increasing. The furnaces are working smoothly, and the two stone furnaces are averaging between 60 and 70 tons per diem. All the machinery is in good working order.

— R. Rickard, Feb. 13: The furnaces are doing good work, the two stone furnaces have been averaging for the past few days 65 tons daily; at first the ore was very low grade, both in lead and precious metals, and contained very little iron, and was consequently very hard to swelt, the ore now is improving in assay for lead and precious metals. The Nos. 11 and 12 chambers when first opened produced low-grade ore, which was also very much mixed with boulders of lime, but now we have got into the ore body, and are now able to take out a good average ore. The Nos. 11 and 12 chambers are proving to be quite equal to what I expected. No. 10 chamber is opening out very well, and shows considerable ore in sight. The No. 7 chamber is also turning out some very fair average ore. The 600 on fissure is improving as we advance with it; I expect to strike ore in this drift within the next 75 ft. drifting. The north cross-cut on the 600 I intend to push out until it strikes the fissure, and then on to the shale; this will thoroughly prove the ground in this direction. The 900 west has been extended from the shaft 510 ft. in the underlying limestone; as soon as the rise now being put up from the 900 has been connected with the 800 winze for ventilation the cross-cut will be continued to cut the quartzite and extend north through the quartzite, and into the lime. The mine altogether is looking very well, with a large quantity of ore in sight; we are pushing on explorations in all directions, so as to open out other ore bodies before this is exhausted. This winter has been the most severe I have experienced in this place; we have nevertheless managed to get in a pretty good supply both of coal and wood.

BLUE TENT.—T. Price, Feb. 11: Washing has commenced with water from Mount Vernon and New York ditches, and the water was expected to reach the Tent this evening. It is still storming, and the rainfall is very heavy; prospects most favourable to-day and yesterday that we shall be able to wash continuously from this time on this season, and that with our own water.

NEW QUEBRADA.—We are requested to state that the usual monthly advices from the mines' superintendent accidentally missed the French mail which arrived on Feb. 28, and that the despatches cannot now be received prior to March 15.

GOLD RUN.—J. A. Stone, Feb. 10: My last letter to you was the 25th ult., when I had just commenced opening my incline; at that time it was snowing, but the weather soon changed very cold, and reduced the water very much, so that I could not get ahead to wash steadily, but I run all I could get. I could wash two or three hours at a time, and in this way I have cleared the incline, and have it in good shape to wash. We have just had a storm of 24 hours, which has started up the ditches again, and to-day I commenced washing through my upper "rig," and if water holds out I shall now wash night and day. I am short of men to work on the bottom, caused by several of the large companies who employ Chinamen agreeing not to pay but 10 cents an hour for Chinamen; I think they will soon go to work at the reduced wages. The gravel and bed-rock around the incline where I have washed to the bottom look very encouraging, showing gold in the gravel. From two pans of dirt on the bed-rock I got $31; I selected the gravel from the most favourable place. I hope that nothing will occur to prevent or retard my work in the future.

PLACERVILLE.—Isaac Thomas, Feb. 8: During the past two weeks ending this date the main shaft has been sunk 17 feet, making a total depth of 435 feet. The winze has been sunk 4 ft., making a total depth of 77 ft. The 4th level has been driven north 11 ft., making a total length of 41 ft.

ISABELLE (Gold and Silver).—Mr. Bugbee, foreman, reports to the manager, Feb. 8: I have had four men in the tunnel, we have run 9 ft., making the total distance from the monument 85 ft. I have worked carefully to get underground with the tunnel, I cannot perceive any change in the rock, but I think it will work better as we advance. I have completed powder-house, engine-room, and shed closed in. Grading will finish in a few days; it has been somewhat tedious owing to frost. I have hauled eight loads of sand and four of bricks for foundations of the compressors and setting boilers; also timbers for trestle. The blacksmith is overhauling the pumps. The work is under all circumstances progressing very well. I have been experimenting with Judson powder, and find it to be a great saving over any powder I have ever used, but doubt very much whether we can use it after we arrive at a distance of 150 ft. from the mouth of the tunnel owing to the smoke and fumes.

SENTEIN.—The managers (March 1) report that the badness of the weather during this week has prevented our resuming operations at the mine, but it has now changed for the better, sun shining strong and melting the snow fast, and by Monday next we expect the miners will all go to the mine again. We are strongly of opinion that we shall not have much more snow for this year, and it is not very likely our men will be again prevented from working by it. We have been able to continue operations at the Bocard without interruption, and everything is progressing satisfactorily. The jigging riddles, the water-wheel and shafting are all fixed, and the ground is now levelled out for the jigging hutches, which will be fixed in a few days.

The smiths are getting on well with the big launder; the beams to support th

amo are already in their places. At the upper floors we have made and fixed jigging hutches, and the water-wheel to drive these machines is also made, and will be fixed next week. We purpose bringing water to drive this wheel by a syphon pipe from a leat behind the turbine. The wheelwrights have recommenced the making of the wagons, and we shall have 23 finished next week. We are now painting those that are finished. Total quantity of ore in hand 1488 tons.

PITANGUI (Gold).—T. S. Trelcar, Pitangui, Jan. 15 and 31: A further attempt to advance the left hand level had been made, and again proved unsuccessful, owing to the water. Operations in all three levels were then suspended, and a rise put up, with a view of cutting the stream of water above, in order to drain it off if possible from the ends of the levels. On Jan. 24 the water broke into the rise on the right or lode side, and about midway up, and for two or three hours the torrents were as great, if not greater, than anything before seen, thus showing that notwithstanding the quantity steadily flowing into the adit water had been accumulating above. A good deal of debris came down with the first burst, but none had come since, and the water was daily getting clearer; it was hoped that an examination of this place could be made in the course of a few days. The expediency of again attempting to advance the ends will then be considered. Meantime the shaft was being pushed on, and a tatoo or small inclined level in connection therewith for ventilation. The shaft was resumed on Jan. 17, and a depth of 15 fms. had already been attained. From this horizon a level would pass under the deepest parts of the former workings on the upper veins of gold. Sinking was still proceeding satisfactorily, but the progress would not be quite so good henceforth, for a little water was appearing in the bottom, and a heavier class of timberwork will, consequently, be required. It was manifest that the adit is draining the ground, but the process does not keep pace with the rate at which the sinking has been going on. In the event of having to stop the sinking of the shaft for the water to drain down, an exploratory cross-cut to the lode would be commenced at the deepest point practicable.

EBERHARDT AND AURORA.—Extracts from Captain Drake's letter, dated Feb. 10: Tunnel: You will see by the tunnel supply sheet that the Eberhardt drift is being run by contract, at a cost price of $17 50 per foot. Messrs. Skinner and Read are the contractors, and they furnish all supplies, with the exception of air and water pipe, T rails, and lumber for ties, &c., which costs $1·56 per foot, making a total cost (for drift alone) of $19·06, as shown in supply sheet. I would call your attention to the item in total cost column of $371 99. This amount was expended in the main tunnel, and has no reference or connection with the Eberhardt Drift: The total length of the drift from tunnel on Jan. 31 was 219 ft. The distance run for the week ending Feb. 8 was 54 ft., making the total length to Feb. 8 273 ft. There is no particular change to note in the character of the rock; it is good breaking ground, and we doubtless will be able to make from 210 to 220 ft. this month. I have neglected to send you a regular weekly report, but should the directors think it desirable, I will do so in the future.

Monthly Expenditure: In compliance with the wishes of the directors I have reduced every expense possible, I have suspended Mr. Maxwell, my mine superintendent, my brother Oliver, accountant Mr Grey, watchman at the mine, and E. Willard, watchman of the Shermantown property, as heretofore stated. My force now consists as follows: One day watchman at Eberhardt and Aurora mill and other property belonging to the company in Eberhardt at $124 per month, one night watchman for same at $93 per month; one office man, Mr. J. J. Marty, $124 per month: manager's expense (servant). $50 per month: total, $391. Salary account, $833·33; forage for two horses, $60; tolls, $20; general and office expenses, $50; water (estimated), $800: total, $2154 33. Should we run 200 feet per month in drift at the above estimate it would make a cost of $10·77 per foot, add this to the contract price ($19·06) and it will make a total cost of $29 83, or a monthly expenditure of $5966 33. The expense of water is heavy, as you can see, but it is impossible to run the tunnel without it; as soon as spring opens we will no doubt be able to close down the waterworks, and then procure all the water necessary from the Robinson spring. I do not wish to be bound to the above figures, but have given them on as close an estimate as I am capable.

PESTARENA UNITED.—March 1: The gold returns for the past month are as follows:—From Val Toppa district, 299 ozs 17 dwts. 10 grs., from 584 tons of ore amalgamated: yield per ton, 10 dwts. 6¼ grs. From Pestarena district, 100 ozs. 4 dwts. 22 grs. from 128 tons of ore amalgamated; yield per ton, 15 dwts. 16½ grs. Total from the two districts, 400 ozs. 2 dwts. 8 grs., from 712 tons: average yield per ton, 11 dwts. 5½ grs.

LUSITANIAN.—Feb. 28: Levels on Basto's Lode: The lode in the 180, west of the slide lode, is 1½ ft. wide, giving good stones of ore. The lode in the 150, west of the slide lode, is 3½ ft. wide, with large crevices.—Stopes on Basto's Lode: The 200, west of Taylor's shaft, is worth 4 tons for the month; the 200, east of Taylor's shaft, 3 tons, and the 180, east of Taylor's shaft, 3 tons.

LEAD, AND LEAD MINES.

All information bearing upon this important branch of our industry will be peculiarly acceptable at this time to all those whose interests lay in this direction. No one feature has tended more directly to depress prices of lead in our market than the unexpected competition we have encountered from the United States in neutral markets. America not only suddenly ceased to buy from us from 20,000 to 30,000 tons per annum, but at the same time commenced shipping freely from San Francisco to the Oriental markets, and even to Australia. Lead in the United States from 1870 to 1877 ranged from 29*l.* to 32*l.* per ton, when a very gradual decline took place, until it reached 15*l.* per ton last year, but with the very general revival of business in America it has steadily advanced since June, 1878, up to February, 1879, and by last advices, received this week from New York, it was 22*l.* 10s., and very firmly held for higher prices, as it was thought it would soon reach 25*l.* per ton. The duty on lead imported into the United States is very heavy, being over 8*l.* per ton. This will in future probably shut out all European competition, and leave the American market exclusively to its own supplies. The population of the United States is now 50,000,000, and rapidly increasing, and as business has undergone a gradual and evidently permanent revival there, based on the development of her extensive resources, both agricultural and mineral, and the resumption of specie payments, with 60,000,000*l.* gold in the United States Government Treasury and in their banks, we will no longer find them a competitor in neutral markets, as they will find a ready home demand at prices above those to be realised abroad, particularly so long as all foreign supplies are shut out by high duties. With the United States confined to supplying its own market England will get back, and that quickly, her former trade in all the Oriental and other markets, which must restore prices to something like those which have ruled for the past five years—24*l.* to 25*l.* per ton. The present price of English pig-lead being only about 13*l.* 10s. per ton.

Our annual production of lead has been about 61,000 tons, our imports have been about 94,000 tons, and our home consumption has been about 113,000 tons per annum, and consequently our exports have been about 42,000 tons, 16,000 tons of which went to China and Japan. With the opening of Spring building will be resumed, and other industries, which will of necessity consume a large quantity of lead. These facts joined to many others presented in our columns from time to time must infuse new life in this important industry. Lead will follow tin, which has advanced 6*l.* per ton within a few days. Our mines having also greatly reduced their output, and many of the Spanish mines having shut down, former supplies are reduced nearly one-half. A good time has at last arrived, it would seem, for investors in lead mines.

THE DUCHY OF CORNWALL.—The accounts of the Duchy of Cornwall for the year 1878 have been issued in a Parliamentary paper. The receipts for the year amounted to 93,885*l.* 17s. 6¼d. The payments made for the Prince of Wales's use amounted to 65,831*l.* 14s. 8d., and the balance on Dec. 31, 1878, to 7462*l.* 18s. 10½d.

THE ELECTRIC LIGHT.—Twenty-three Bills with reference to the electric light are before Parliament, all of which are to be referred to a committee of seven members, four to be appointed by the House of Commons and three by the Committee of Selection. The object of the committee is to determine the principles on which Parliament will grant powers for the use of the electric light, with special reference to the claims of gas companies.

ELECTRIC LIGHTING OF MINES AND HOUSES.—The chief object of the improvements of Mr. J. W. DE CASTRO, of New York, which relate to apparatus for dividing and transmitting to several different points light from a single source, is to safely illuminate the shafts and galleries of mines, underground tunnels, or the different chambers of many-storied buildings; and the said invention consists chiefly in combining with a powerful source of light mirrors for condensing and parallelising the rays of light and directing them into the mouth of a tube, from the opposite end of which they are reflected in one or more different directions by means of mirrors or prisms into the mouth or mouths of smaller tubes, from which they may be again reflected by mirrors or prisms in another direction or directions, until, being finally carried to the required point they are thrown against a mirror or prism which reflects or refracts them into the chamber or space or upon the object to be illuminated. The mirrors or lenses employed being either plane, concave, convex, plano-concave, or plano-convex, as may be required, and the relative areas of the primary receiving tube and the distributing tubes being proportioned with reference to the capacity of the condensing mirrors to intensify the beam of light thrown into the primary receiving tube.

*** With this week's Journal a SUPPLEMENTAL SHEET is given, which contains: Original Correspondence: The Rio Tinto Company—the Huelva District British Trade with Spain; Gold Mines in the Jacotinga Formations of Brazil (F Dietzsch); Mining Prospects on the Pacific Coast (H. J. Macrae); the Cape Mines; Surface Condensers (W. Nance); Improvements—Things Old and New (W. Nance): A New Process in Metallurgy (John Holliway); Reducing Sulphide Ores without Fuel (Alfred H. Allen); Blasting Coal by Compressed Air; Explosions in Coal Mines; Rock-Boring Machines (John Barkell); The New Patent Bill (William P. Thompson and Co.); Free Trade; Mining in the Channel Islands; Welsh Granite Quarries (Edmund Spargo); the Cambrian Mining Company (G. H. Keene); the Cambrian Mines (A. Francis); Mining in Cardiganshire; Penstruthal Mine, and its Prospects; Is it Right to Pay any Purchase-Money for Mines? (W. Salmon); a Retrospect; Mining and Banking in Cornwall; Cornish Mining, and its Prospects (C. Bawden)—Fireless Locomotive for Tramways—the Antiquity of Copper Mining in Cornwall and Devonshire—the Scotch Mining Market—Mechanical Stokers, and Smoke Preventers (*illustrated*)—Bailey's Water-Motor Hauling and Pumping Engines (*illustrated*)—Patent Matters—Meetings of Malpaso, Rica, Malabar, Marbella, Last Chance, Carn Brea, and Tincroft Mining Companies, &c.

TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply to—
MESSRS. PELLY, BOYLE, AND CO.,
SWORN METAL BROKERS,
ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.
(ESTABLISHED 1849.)

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, MARCH 7, 1879.

IRON.	£	s.	d.	£	s.	d
Pig, GMB, f.o.b., Clyde..	2	4	0-	—		
,, Scotch, all No. 1 ...	2	4	0-	3	5	0
Bars, Welsh, f.o.b. Wales	4	15	0-	5	0	0
,, ,, in London.	5	2	6-	5	7	6
,, Stafford., ,, .	6	5	0-	7	0	0
,, in Tyne or Tees ...	5	5	0-	5	10	0
,, Swedish, London ..	8	15	0-	9	0	0
Rails, Welsh, at works..	4	15	0-	—		
Sheets, Staff., in London	7	15	0-	8	5	0
Plates, ship., in London	6	12	6-	—		
Hoops, Staff.	6	15	0-	7	5	0
Nail rods, Staff. in Lon.	5	15	0-	6	5	0
STEEL.						
English, spring 13	10	0-	19	0	0	
,, cast 30	0	0-	40	0	0	
Swedish, keg.... 14	0	0-	—			
,, fag. ham. 15	0	0-	—			
LEAD.						
English pig, common . 13	15	0-	—			
,, ,, L.B. 14	0	0-	—			
,, ,, W.B. 14	10	0-	—			
,, sheet and bar..14	5	0	14	10	0	
,, pipe 15	0	0-	—			
,, red 16	0	0-	—			
,, white 24	0	0-	—			
,, patent shot ..18	0	0-	—			
Spanish 13	10	0	13	15	0	
NICKEL.						
Metal, per cwt 18	0	0	20	0	0	
Ore, 10 per cent. per ton.24	0	0	28	0	0	
QUICKSILVER.						
Flasks of 75 lbs., ware..	6	2	6-	—		
SPELTER.						
Silesian	15	0	0-	—		
English, Swansea	16	0	0-	—		
Sheet zinc	20	10	0-	—		

TIN.	£	s.	d.	£	s.	d
English, ingot, f.o.b...	67	10	0-	—		
,, bars ,, ...	68	10	0-	—		
,, refined.....	69	0	0-	—		
Australian	63	0	0-	—		
Banca ..... (nom.)	64	0	0-	—		
Straits	63	0	0-	—		
COPPER.						
Tough cake and ingot.	59	0	0-	60	0	0
Best selected	60	0	0-	60	10	0
Sheets and sheathing.	64	0	0-	64	10	0
Flat Bottoms	67	0	0-	—		
Wallaroo	63	10	0-	—		
Burra, or P.C.C.	63	0	0-	—		
Other brands	60	0	0	62	0	0
Chili bars, g.o.b.....	54	15	0-	—		
PHOSPHOR BRONZE.						
Bearing metal	£105	0	0			
Other alloys	£110	0	0-	125	0	0
BRASS.						
Wire	7	d.-	7½d.			
Tubes.....	7¾	-	7½			
Sheets	8	-	8¾			
Yel. met. sheath. & sheets.	5	7	10d.	5½		
Nails composition.....	7¾	-	—			

TIN-PLATES.*	per box.					
Charcoal, 1st quality ...	1	1	6	1	2	0
,, 2nd quality ...	1	0	0-	1	1	0
Coke, 1st quality	0	17	6-	0	18	6
,, 2nd quality	0	16	0-	0	17	0
Black .....per ton	16	0	0-	16	10	0
Canada, Staff. or Gla., at Liverpool	11	0	0-	12	0	0
Black Taggers, 450 of 14 × 10	30	0	0-	—		

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—There is no very marked change in the state of the metal market, and prices show but little variation from last week's quotations. The present month has certainly opened indifferently, and the little extra disposition which was shown by buyers to purchase towards the latter end of February has not been manifested to the same extent, for consumers absent themselves to a very considerable degree, and refuse to buy beyond their immediate wants. Speculators, too, hold aloof almost entirely, the past crisis in affairs generally having completely unnerved them, and there is little probability of their coming forward again until the course of business takes a favourable turn, as they know too well by past experience that until a sensible reduction be made in stocks there can be no improvement in prices, and also that as long as stocks increase a further depreciation in value must occur. In this policy of temporarily ceasing to enter into contracts they are certainly acting wisely, and with discretion, for it seems that to continue in making purchases at the present season of adversity is nothing less than adding loss to loss, and which must bring forth eventually utter ruinous results. But yet there should be great care taken not to delay operating for too long a period, as no one who has watched the markets with any attention whatever during the past few months can be blind to the very heavy losses that sellers have been and are still forced to submit to, and as producers can not possibly continue very much longer in this most ruinous course, the production will undoubtedly be considerably cut down, and supplies regulated more in accordance with the demand; and as the markets are so heavily weighted, which make buyers fear that the large stock may be thrown at any time on the market, it naturally checks any improvement that would otherwise take place in prices, and there can be but little doubt that as soon as this great drawback is effectually remedied quotations will advance in about the same proportion as stocks decrease, for sellers will undoubtedly upon any revival in the demand do their best to benefit from it, and enforce much higher rates from buyers. But sellers cling to the hope that the cheapness of money will very soon make a favourable impression in the trade, and that the vast accumulations now lying at the Bank entirely unemployed will soon be invested in produce, and that metals will come in for their share of investment. These are no doubt very good grounds for building their hopes of an improvement in trade, and probably the only reason why capitalists have not come forward ere this is on account of the general disinclination and inability to transact business at the present time.

COPPER.—The copper market keeps in a most depressed condition, and prices are quoted a little lower. There can be no improvement in quotations while the statistics continue so unfavourable. Those published on the 1st inst. are not only noteworthy for recording the lowest prices, but also for the largest stocks, the total, including afloat and chartered, amounting to no less than 54,849 tons, against 52,978 tons for the previous month, and 47,241 tons on March 1, 1878. However, the stock of Chilian and Bolivian copper in first and second hands in Liverpool and Swansea shows a decrease of 776 tons for the last half of February, is now being estimated at 26,800 tons. The stock of Chili copper afloat and chartered is reported at 13,400 tons, being 2500 tons above what it was at the end of February, 1878. The stock of foreign copper in London is stated at about 6542 tons, against 5800 tons for the same period in 1878. The charters for last month were telegraphed at 3400 tons, being 1100 tons for the last fortnight. The price has receded to 13·60, which is equivalent to about 62*l.* 15s. per ton cost and freight Liverpool, including 2½ per cent. Valparaiso commission. The exchange remains unaltered at 38¼. With these most unfavourable returns otherwise than a very dull and monotonous market could not be expected, and sellers will probably have to bear up some time longer before enhanced prices can be realised, as consumers are very loth to operate while stocks are so high.

IRON.—There is but little variation in the state of the market for this metal, and transactions effected are but few, and for comparatively small quantities. Quotations generally are about the same, and the demand for all descriptions is very limited. This metal has had to contend against more drawbacks during the long depression in trade than most others, not only on account of the foreign competition, but also owing to the difficulties of the labour question, consequently stocks have been accumulating very rapidly, both in makers' hands and public stores. And notwithstanding the many reductions which have been made in prices, quotations have evidently not yet been brought down low enough to secure sufficient work to keep the mills going for anything like the time necessary to keep them profitable employed. Sellers have always been too late in reducing their quotations, for they have at all times waited until they were becoming entirely void of orders. A good deal of the loss which has been sustained by the trade might have been saved had the masters and men come to some understanding by which a sensible reduction in price might have been made as soon as they discovered that the demand would not warrant the high rates which were then ruling. Although the present low prices are most unprofitable, still producers must not be in too great a hurry to advance them, but must still offer every inducement to buyers to place their future orders with the English works, and not allow themselves to be perpetually undersold. The statistics showing the stock in Messrs. Connal and Co.'s yards for last month are most unsatisfactory, for they show an increase of 11,497 tons, which brings the total stock up to 217,916 tons in Glasgow, with warrants in circulation for 187,095 tons. There is also an increase in stock of Middlesborough iron of 6700 tons, thereby making a total of 80,200 tons, with warrants in circulation for 77,800 tons. The returns from Leeds show that there is no improvement in this part of the country, and the demand for best Yorkshire iron is particularly limited, and there but very few orders given out for manufactured. Prices are quoted about the same, sellers declaring themselves to be quite incapable of making any reduction.

The markets at Sheffield are stated as being dull and quiet. Prices are easy, but orders are scarce, and there appears to be no disposition on the part of buyers to enter into any contracts beyond what is wanted to meet their present requirements. No improvement can be stated to have taken place in the Welsh districts, and the works are suffering considerably from the marked scarcity of orders, which is only too apparent. The Middlesborough market, however, is said to have shown more firmness, and makers believe, owing to the little extra demand that has set in, that probably a reduction in stocks will soon be announced. Prices for pigs have rather advanced, and No. 3 is now quoted at about 35s. per ton, and No. 4 at about 1s. to 1s. 3d. per ton less. The slight improvement in this district is said to have brought out many speculators, which helps to enliven the market. The shipments for February to Scotland are said to be in excess of what they were for the corresponding period of 1878, though for the last week they show a slight decrease. Prices for manufactured are also stated to be firmer which is owing probably to the increased quotations for pigs. There is no alteration in the price of bars, but boiler plates are quoted 5*l.* 5s., and ship plates at 1*l.* per ton less. A more lively tone has been noticed on the warrant market at Glasgow. The market opened firm on Monday at 44s. 3d., and soon advanced to 44s. 6d., but towards the close buyers became scarce, and the priced receded to 44s. 2d. On Tuesday it fluctuated again rather, and the closing price was 44s. 1½d. Since then there has been no very marked change, and our markets now close at 44s. 2d. per ton.

SHIPMENTS.

For the week ending March 1, 1879 ..... Tons	8,318
For the week ending March 2, 1878	7,860
Increase	458
Total increase for 1879	9,809
Imports of Middlesborough pig-iron into Grangemouth:—	
For the week ending March 2, 1878 ..... Tons	6,516
For the week ending March 1, 1879	6,305
Decrease	211
Total decrease for 1879	5,453

FURNACES.

In blast March 2, 1878	85
In blast March 1, 1879	89

TIN.—Since our last issue the market has rather fluctuated, the lowest price quoted being 62*l.* 5s., but the present quotation is 63*l.* The statistics published on March 1 show a further increase in stocks amounting to 405 tons. The total stock on Feb. 28 is estimated at 17,842 tons, against 17,437 tons on Jan. 31, and 16,290 tons on Feb. 28, 1878, and 16,210 tons on Feb 28, 1877. The deliveries for the month are, as anticipated, good, being 1790 tons and 131 tons overside to America, against 1401 tons for the previous month, and 1593 tons for February, 1878, and 1429 tons for the same month in 1877. Shipments from Straits during the month are very much less than what they were in January, being only 225 tons, against 950 tons; but those from Australia show very little change, being only 2 tons above what they were last month. The total now being 485 tons, against 853 tons for February, 1878, and 1045 tons for February, 1877. The deliveries of foreign tin in London during the twelve months ending Feb. 28, 1879, show an increase, being 12,345 tons, against 11,269 tons for the previous twelve months, and 10,097 tons for the twelve months ending Feb. 28, 1877. The total quantity of Banca in Trading Company's hands and afloat is estimated at about 1741 tons. These statistics, although unsatisfactory, are not so unfavourable as most of their immediate predecessors, as the deliveries show a decided improvement. The principal feature in regard to the market at the present time rests upon the shipments from the Straits, which are particularly small in comparison with those which were made a short time ago, when the price here was advanced to about 65*l.* per ton, and undoubtedly would have attained a much higher figure.

Had it not been for the greatly increased supply from the Straits there is no question but what, ere this, the price would have touched 75*l.* if only ordinary quantities had come forward. But it would appear that shippers crowded as much as possible all their available stocks in vessels leaving for Europe. But by such imprudent haste they destroyed their market, and lost the object they had in view, for as soon as the heavy shipments became known prices quickly receded until they reached 59*l.* 5s. But now that the bulk of these shipments have arrived the market once again displays more elasticity, and it is very certain that if the supplies during the next month or two from the Straits and Australia amount to no more than they have during the past month, there will be a considerable rise in the value of this metal. It may be gradual, but it will be sure. But it is not unlikely to rise much faster, perhaps, than many anticipate, as it is decidedly the best, if not the only, metal which just now presents any inducement for speculators to operate for a rise. Everything, however, depends upon the future supply. That on no account should be increased yet awhile, for then there will be a fair chance of obtaining higher rates, as the good deliveries will probably continue to be maintained, many of the tin-plate works having effected considerable sales of plates for deliveries which will extend over the next three months, and therefore for this purpose alone a large quantity of tin must necessarily be required. Holders who have been quietly and patiently trusting in hope may not now have to wait much longer ere their expectations are realised. If sellers will only pull together a little better than they have hitherto done. The market will be benefitted, and give more general satisfaction.

LEAD.—The market for this metal has at last shown some slight improvement, and prices have during the week become somewhat firmer, English pig now being quoted from 13*l.* 15s. to 14*l.* per ton.

SPELTER.—There is no particular change in the state of the market for this metal, the demand being very limited at somewhat lower figures.

TIN-PLATES.—A fair demand exists for tin-plates, without any marked alteration in quotations.

STEEL inactive.

QUICKSILVER has been reduced in price to 6*l.* 2s. 6d., at which good sales were made, but the demand has again become slack.

CHEMICALS, MINERALS, AND METALS.—Messrs. J. Berger Spence and Co. (March 1)—Alum: Loose lump, 6*l.* 5s. 0d.; ground, 6*l.* 15s.—Arsenic: Best white powdered, 9*l.*—Borax: Refined, English, 36*l.*—Copperas: Green, 50s. 0d.; white, 8*l.* 7s. 6d.—Copper: Sulphate, 18*l.* 5s. to 18*l.* 10s.—Nitrate of Lead, 31*l.* 5s.—Saltpetre: Refined English, 23*l.* 15s. to 25*l.*—Sulphate of Zinc, 12*l.* 12s. 6d.: —Sulphur: Roll, 8*l.* 10s.; flowers, 10*l.* 10s.—Tin crystals, 5½d. per lb.—White Lead, 20*l.* to 21*l.* 10s.—Barytes: Carbonate, 5*l.*—Brimstone: Best thirds, 4*l.* 17s. 6d. —China-Clay, 38s.—Oxide of Zinc, 22*l.* 10s.—Talc, 5*l.*—Umber, 70s.—Charcoal: Best stick, 4½d. per bushel; field burnt, 6d.—Globe Steam-Boiler Powder, 16s. per cwt.—Naphtha, 60 per cent., 3s. 6d.

Messrs. PIXLEY and ABELL.—GOLD: Orders on German account have cleared off about 190,000*l.* from this market, but small amounts of coin, bars, and sovereigns from Australia and India have been sent into the Bank, the aggregate amount being 211,000*l.* The arrivals of the week comprise 47,400*l.* from the West Indies, 50,000*l.* from Australia, 19,098*l.* from the Brazils, 116,660*l.* from India, &c.; total, 233,158*l.* The Guadiana takes 115,000*l.* to the River Plate, the Medway 24,540*l.* to the West Indies, and the Danube 150,000*l.* to the Cape.—SILVER: At the close of last week the market again became flatter, and 49⅛d. per oz. was all that could be obtained for the arrivals by the Pacific and West India steamers; a considerable amount of dollars by this last vessel, converted into bar silver, were also sold at the same rate. The price has slightly improved, owing to a few orders coming on a market almost bare of supplies, and 49⅝d. has been paid today for small sums. The Iberia brought 29,000*l.* from the Pacific, the Don 35,300*l.* from the West Indies, sundry steamers 40,000*l.* from New York: total, 104,300*l.* The P. and O. steamer takes 19,000*l.* to Bombay.

THE MINING SHARE MARKET has been firmer this week, and moderately active in regard to business transactions, though the great difficulty has been to get shares in the mines mostly in demand, even at the advanced rates. Those mostly dealt in have been Wheal Peevor, South Frances, Dolcoath, Parys Mountain, Morfa Du, Tankerville, West Basset, Wheal Crebor, and a few others.

TIN MINES.—No further rise has taken place in the standards for ore, but tin is firm. It has been estimated that during the month of February nine tin mines rose in market value 76,000*l.* Carn Brea, 30 to 32; at the meeting in Cornwall the accounts showed a loss of 457*l.* 19s. 8d. on three months' working, and a balance against the mine of 22,196*l.* The credits for tin, 204 tons, including 75 tons not sold, but ready for sale, was 9581*l.*; total credits, 9765*l.* 16s. The total costs were 10,225*l.* The cost of raising a ton of tin is 35*l.* Tincroft, 9½ to 10; at the meeting the accounts showed a profit of 1758*l.* 9s. 10d. on the quarter, and a balance against the mine of 11,285*l.* The total costs for three months was 5792*l.* 6s.; credits, 7550*l.* 16s. The tin sold, with 30 tons ready for sale, credited at 7287*l.* 18s.; copper ore, 212*l.* The agent stated they were raising tin at 27*l.* per ton, as against 35*l.* per ton at Carn Brea, Dolcoath, 26 to 28; South Condurrow, 10½ to 11.

West Basset, 3½ to 4½; East Pool, 9½ to 10; South Frances, 9 to 9½; Wheal Agar, 3¾ to 4; Wheal Grenville, 1½ to 2. Wheal Peevor, 10 to 10½; at the meeting next week a dividend of 7s. 6d. per share is expected. Cook's Kitchen, 1 to 1¼; at the meeting, on Thursday, the accounts as presented showed a loss of 1421*l.* 10s. on four months' working, and a call of 10s. per share was made. The agents report that the prospects of the mine were better than for some time past, and the tin returns for the next quarter would be increased. At New Cook's Kitchen meeting a call of 4s. per share was made. The accounts showed a loss on four months of 730*l.*, and a debit balance of 1255*l.* West Frances, 3 to 3½; at the meeting the accounts showed a loss of 533*l.* 18s. on four months' working, and a debit balance of 3879*l.* A call of 5s. per share was made. In reference to the great flat lode, the captain of the mine says he has dialled and levelled it, and there was not a shadow of a doubt that the lode stood entire throughout West Frances.

COPPER MINES.—The standard for ore declined 1*l.* at the Cornish Ticketing on Thursday. The average price realised was 2*l.* 19s. per ton. West Tolgus, 30 to 32; at the meeting in Cornwall the accounts showed—Sales of copper (555 tons) 3168*l.*; and a profit on two months of 305*l.* was shown, leaving a balance in hand of 1607*l.* No dividend was declared, which is the first time the mine has missed paying for four years. Wheal Crebor, 4s. to 6s.; at the meeting, particulars of which will be found in another column, the accounts, charging five months' costs against four months' returns, showed a loss of 628*l.* 9s. 1d., and a balance against the company of 451*l.* 0s. 9d. A call of 1s. 6d. per share was made. The prospects of the mine for increased returns have considerably improved of late. Mellangar, 4 to 4½; the sales of ore on Thursday—600 tons—

realised 1881*l.* Parys Mountain, 9s. to 11s.; Morfa Du, 17s. 6d. to 20s.; West Seton, 5 to 7.

LEAD MINES show very little change, but the metal is said to be firmer both in America and in this country, and a better price for ore is looked for. Van, 18 to 19; no change at the mine. The sale of ore on Thursday—500 tons—realised 5187*l.* 10s., and an advance of 7s. 4d. per ton on the last month's sale. Roman Gravels, 6 to 6½; no change here. Tankerville, 2 to 2½; the sampling on Thursday will be 100 tons of lead. Great Laxey, 15 to 16. Pateley Bridge, 15s. to 20s.; the 30 east, on Rake vein, is again improving, and the sump under this level maintains its value of 10 tons per fathom. West Pateley, 2 to 2½; Assheton, ¾ to 1; Bettws-y-Coed, 20s. to 25s.; Combmartin, 2s. 6d. to 5s.; East Van, 1⅝ to 1¾; Glenroy, 7s. 6d. to 12s. 6d.; Leadhills, 1½ to 2; Mineral Corporation, 10 to 11; West Assheton, 15s. to 20s.; West Chiverton, 15s. to 25s.; D'Eresby Mountain, 30 to 40; Aberllyn, 10 to 12; Clementina, 1 to 1¼; Wye Valley, 10s. to 15s.; West Wye Valley, 1½ to 2.

Caron, 2 to 2½; Frongoch, 2½ to 2⅝; Grogwinion, 2 to 2½; Hartington, 1½ to 2; Mawston, 1½ to 2. Red Rock, 1⅞ to 2½; this mine sold 40 tons of lead on the 1st inst., at 7*l.* 17s. 6d. per ton. Herodstoot, 3 to 4. West Tankerville sampling of blende this week is 20 tons, and 30 tons of lead. Two of the tributors have cut into a lode at the back of the 75 south worth 4 tons of lead ore per fm. South Darren, 32s. 6d. to 35s.; the sale of lead this week (25 tons) realised 14*l.* 16s. per ton, or an advance of 5s. on the 40 tons sold a fortnight ago. Pandora has improved in the 35 south on Goddard's lode, and is now worth 1 ton of lead per fathom.

FOREIGN MINES.—Cape Coppers have fluctuated, owing to various rumours, and leave off 26½ to 27½. Chontales, 7s. 6d. to 12s. 6d.; Don Pedro North Del Rey, 18s. to 20s.; Eberhardt and Aurora, 3⅝ to 3¾; Exchequer, ⅛ to ¼; Frontino and Bolivia, 2 to 2½. Placerville, 2⅛ to 2¼; the shaft under the 400 is now down 35 ft., the north end driving in good quartz. Javali, 4s. to 6s.; Last Chance, ⅝ to ⅝; New Zealand Kapanga, 7s. 6d. to 12s. 6d.; New Quebrada, 1½ to 1⅝; Pestarena, 2s. 6d. to 3s. 6d.; Port Phillip, ⅜ to ½; Richmond, 9 to 9½; St. John Del Rey, 265 to 275; Santa Barbara, 37s. 6d. to 42s. 6d.

The Market for Mine Shares on the Stock Exchange maintains the improvement noticed last week, and there is altogether a better feeling as to the future. The subject which has probably most engrossed the attention of those who interest themselves in mining enterprises is the project for developing the South Wynaad (India) gold properties, and concerning these the opinions pretty freely expressed are not encouraging. The interest of those concerned has, no doubt, been much prejudiced by the unaccountable delay of the Government in issuing the reports of Mr. R. Brough Smyth. The substance of them has already been made known through the Indian papers, and it is understood that the accompanying plans are now being made, and that the reports will then be published. In the meantime the most damaging rumours are in circulation as to the commercial value of the deposits, so that intending investors are indisposed to risk their money until they have authortative details. It is stated that the gold reefs and alluvia are all that could be desired, and that there is far too little water to permit of any profit being realised from working them; there are only a few miserable streams, and these are entirely dried up during several months of the year; in addition to this the general facilities for mining are said to be very poor. Now, when such rumours once gain currency nothing but the contradiction of a man of Brough Smyth's position will stop them, and everyone knows that to attempt gold mining without an abundance of water can only lead to loss and disappointment. Taking all the circumstances into consideration, it is thought that the 4,000,000*l.* profits to be divided between the purchasers and the vendors before the City of Glasgow Bank liquidators will postpone the beneficial interest of the Glasgow Bank creditors for an indefinite period. Many have regarded the whole project as a joke, but there is no doubt that the vendors are serious, though sanguine, although whether capitalists will be sufficiently credulous to support them remains to be seen.

The Old Telegraph Mine (Mines d'argent de Bingham) continues to command the attention of a large number of speculators on the Paris market; but the disagreeable facts which have been so extensively circulated through the Credit National and other independent sources has somewhat discomforted the promoters, and even the quotations now show a heavy discount instead of a premium. In noticing the *compte rendu* of the meeting one very important point was omitted. Mr. Chaper, one of the French engineers who has reported favourably on the property, states that "la longueur d'affleurement appartenant à la Old Telegraph Mine est de 3800 pieds, soits 1155 mètres. Aux termes de la loi americaine la propriete minière definie dans le titre qui porte le nom de Patent n'est pas limitée, en ce qui concerne l'exploitation souterraine, par plans verticaux qui circonscrivent le périmètre de la surface; latéralement, la propriété souterraine s'arrête bien aux plans verticaux des parties du périmetre qui recoupent l'affleurement, mais entre ces deux plans, tout l'aval pendage du filon appartient au proprietaire du Patent. Les dispositions relatives du filon et du vallon du Bear Gulch sont donc tout particulièrement favorables au developpement et à la continuité de l'exploitation en profondeur." This is absolutely and unquestionably inaccurate, not probably from any fault of Mr. Chaper, but because he has been shown the law of 1866, which was repealed by the law of May 10, 1872. It was precisely this false notion as to the state of the American law that led the Richmond Company to work out of bounds, and take ore which belonged to their neighbours—the Eureka Consolidated. The result led to disastrous litigation between the companies.

The verdicts, according to the previous prediction of the *Mining Journal*, have all been against the Richmond, "kiting" being as much denounced by the American Courts when carried on by companies as by individual workmen against each other. But it should be well understood that the law of 1872 gives the miner ample compensation for what it takes away. Under the old law the miner was entitled to the one vein only, but since 1872 he has become entitled to all the veins within the vertical planes which circumscribe the perimeter of the surface. By section 2320 of the United States Revised Code the claim must not exceed 300 ft., nor be less than 25 ft. on each side of the discovered vein, and the end lines must be parallel. The entire code is, of course, in accordance with this principle. Whatever, then, may be the surface perimeter of the Old Telegraph property, the owners will be prevented by the American law from taking, by virtue of their Old Telegraph patent, any mineral from beyond the vertical planes connected with such surface perimeter. If the dip of the vein and the position of the *affleurement* with respect to the perimeter be stated, any mining engineer can calculate in two minutes the depth at which it will cease to be the property of the owners of the Old Telegraph patent. The American Revised Code is by far too clear and explicit to permit of any such error as that into which Mr. Chaper has been led.

Canada Gold Company shares are said to be quoted 1¼ to 1½, although nothing is yet publicly known as to the location or prospects of the property which it is proposed to work. It is stated that full particulars will be furnished next week regarding it. The capital of the company is divided into 15,000 shares of 1*l.* each, and the undertaking is reported to be commenced under auspices of no ordinary kind. It is estimated that the shareholders will be recouped for their outlay by the first year's operations, and that the country will be benefited by the population which will be attracted to it. A correspondent writes: "From all reliable sources the gold field would seem to be of great magnitude, and how it could have been neglected up to the present is, indeed, a mystery." The attractiveness of the Chaudière and other gold fields within the Dominion has frequently been noticed in the *Mining Journal*, and it is gratifying to observe that they are about to receive attention, but intending investors will do well to await the public issue of a prospectus. Capitalists have already been cautioned against concerns floated, or attempted to be floated, by syndicates, by which *bona fide* subscribers are sacrificed, as the members thereof are enabled to fix their own price as purchase money, and they usually depend upon a share of such nominal purchase money and upon fictitious premiums for their remunerations instead of relying upon the value of the mine.

St. John del Rey, 265 to 275; the latest telegram from the mines at Morro Velho, dated Rio de Janeiro, March 1, states that the produce for the second division (eight days) of February was 10,500 oits., of the value of 4068*l.*, the ley of the ore being 6·3 oits. per ton. Advices from Morro Velho, dated Feb. 2, report all going on well.

Richmond, 9 to 9½; the usual telegram from the mines states that the week's run was $60,000, from 1236 tons of ore. During the week the refinery produced $40 000. The advices dated February 13 are very encouraging. The manager, after reporting on the various points of operation, states that the chambers are all much improved since last week, and the grade of ore is increasing. The furnaces are working smoothly, and the two stone furnaces are averaging between 60 and 70 tons per diem. All the machinery is in good working order. A second report of the same date (the reason of the two is not explained) states that the furnaces are doing good work. The two stone furnaces have been averaging for the past few days 65 tons daily. At first the ore was very low grade both in lead and precious metals, and contained very little iron, and was consequently very hard to smelt. The ore is now improving in assay for lead and precious metals. The mine altogether is looking very well, with a large quantity of ore in sight. They are pushing on explorations in all directions so as to open out other ore bodies before this is exhausted. This winter has been the most severe he has experienced there. They have, nevertheless, managed to get in a pretty good supply both of coal and wood.

The market for Hydraulic or Gold Washing shares has been fairly active during the week, and prices are firm at quotations. The latest news from California speaks of heavy and continuous rain, causing miners to resume washing energetically. The produce from Hydraulic Mine during 1878 reached the very large figures of over $8,000,000, and this industry is rapidly assuming a higher place in the consideration of all practical mining men on the Pacific Coast. The want of water is the only drawback. Blue Tent, 2 to 2½; letters to hand during the week announce the commencement of gold washing. Birdseye Creek, ¾ to ⅝; the latest news announces that washing has been resumed. Full particulars are promised in the next despatches. Placerville, 2 to 2¼; very steady progress is being made in sinking the shaft, which is now down 35 ft. below the 400 ft. level. The level driving north at the 400 is also being pushed on. The quartz continues of the same value; the end is opening out a good body of ore.

The Colombian Hydraulic Mining Company is to be registered with a capital of 75,000*l.*, in shares of 1*l.* each, to take over the property and liabilities of the Malpaso, Rica, and Malabar Companies, which have recently been declared, both by a Vice-Chancellor and by the Master of the Rolls, not to have been fraudulently formed. The meetings for effecting the necessary reconstitution were held on Tuesday, and the general feeling appeared to be that, although the shareholders have obtained no return for the 165,000*l.* expended, and although it now appears probable that the purchase money paid for the mines was highly excessive, it was now desirable, with a view, as Mr. George Batters very properly put it, to "save something from the wreckage," to adopt the Chairman's present scheme. The advantage of the proposed amalgamation is beyond question, for when the concerns were originally placed upon the market it was confidently stated by many unconnected with the promoters that, although the gravels were not unattractive, it was impractical to turn them to much commercial account, owing to the almost total absence of water, and to the want of all the ordinary facilities necessary for working them; and it naturally follows that where only a few miner's inches of water are available there are greater chances of profit when only one instead of three pares of workers are drawing upon it. By the amalgamation scheme the 75,000 shares will be distributed, 29,920 to the Malpaso shareholders, 16,000 to the Rica shareholders, and 26,786 to the Malabar shareholders, leaving a balance of 2294 shares applicable to the payment (under sec. 8 of the scheme) of the overdue salaries of the secretary (Mr. Sydney A. Cobbett) to the date of winding-up the companies. The directors' advances to the Rica Company (the amount of which is not stated in the scheme) are to be repaid in 15 per cent. debentures, which, with 5000*l.* additional debentures to be raised to pay off the liabilities taken over, and "to carry out the necessary works at Malpaso or elsewhere," are repayable by annual or other drawings, with a bonus of 20 per cent. The directors appear to have behaved handsomely in the matter. The Chairman (Mr. J. T. P. Pechey) explained that although he and his colleagues had received free shares from the vendor they were taken in addition to and not as qualification for seats at the board, and now that the matter had been questioned both he and Mr. Cobbett have placed those shares in the secretary's hands at the disposal of the company. It was stated that all the directors have large stakes in the concern. Mr. Pechey has still unbounded faith in the Colombian gravels; Mr. Cobbett has such faith in the enterprise that he has permitted his son to hold the secretaryship, and Mr. Hopkinson was so fully convinced that no company had ever been more fairly formed in the City of London that he has sent a relative to the mines. The Chairman stated that the directors were prepared to subscribe at least 1500*l.* of the debentures proposed to be issued, and it is to be hoped that, for the reasons stated, the other shareholders will give the required support.

Hultafall, 2⅜ to 3; one of the directors is still in Sweden superintending operations generally. From the latest accounts to hand the lode in the 15 is producing rich lead, and the prospects are satisfactory. What is said to be wanted now is a little additional support from the shareholders to carry this mine through to a successful issue, the directors generously offering to contribute half. The additional capital to be raised in the form of debentures would only entail a fixed charge of 600*l.* per annum, and the mines are of great magnitude.

Lead mine shares have been particularly active, owing to the greatly improved condition of the lead market. Van shares have advanced during the week 4*l.*, and Great Laxey are fully 1*l.* better, whilst with regard to other mines, although no rise has been established, there is so much greater firmness that it is difficult to purchase at current quotations. Van, 18 to 19; the usual monthly report will be found in another column. The mine is opening out much as last reported. There has been an active demand for these shares during the week. The 500 tons of lead ore sold on Thursday realised 5187*l.* 10s., a satisfactory advance on the price obtained at last sale.

Mineral Corporation of Great Britain, 10 to 11; the rock-drill trials are shortly to commence. The agent reports that in the Hafna Mines Nos. 2 and 4 adit ends were not let on Saturday, as the men are now engaged in clearing off the ground for the engine and compressor to work the drilling machines, which are to be applied in these two levels. In Great D'Eresby Mine they have suspended the driving of No. 5 adit level for the time being. They are now preparing foundation for the engine and compressor, so as to be in readiness by the time the drilling machinery arrives. At surface they are getting on well with the embankment for the reservoir. In taking out ground for the wheel-pit they have met with some good solid lumps of lead, which leads him to think that they are near the back of another lode. This they will see more of as they get deeper.

Frongoch, 2¾ to 2⅞; the accounts from this mine are still very satisfactory, and excellent progress continues to be made. Grogwinion 2 to 2¼; 100 tons of lead have been sampled for sale next week. All parts of the mine looking favourable. Caron, 2 to 2½; good progress still making here, and prospects very encouraging. Red Rock, 1¾ to 2¼; 40 tons of lead ore have been sold this week at 7*l.* 17s. 6d. per ton. The mine is opening out very well at all chief points of operation. Wye Valley, 1½ to 2; there has been a satisfactory improvement in the 22 east, and the mine is looking well. A further parcel of ore will shortly be sold. West Wye Valley, 1½ to 2; all going on well and prospects improving.

Cwm Brywno, 2 to 2¼; the weather having now cleared up, dressing operations have commenced, and a sale of some 30 or 40 tons of ore will, it is said, shortly be made. The mine is reported to be looking richer than ever in depth. Pateley Bridge, 10s. to 20s; the Rake vein in the 30 east is opening out very satisfactorily, worth 12 cwts. of lead ore per fathom, with every appearance of now opening into another rich body of ore. Sinking has been resumed in the sump under this level, and the vein maintains its previous value—10 tons per fathom. All surface work progressing as usual.

Subjoined are the closing quotations:—

Assheton, ⅝ to ⅞; Carn Brea, 29 to 31; Devon Consols, 1¼ to 1⅛; Dolcoath, 26 to 28; East Van, 1¾ to 2; East Caradon, 1s. 3d. to 3s. 9d; Glyn, ¾ to ⅝; Great Laxey, 15 to 16; Leadhills, 1¼ to 1½; Marke Valley, ⅜ to ⅝; Parys Mountain, ⅜ to ⅝; Pateley Bridge, ¾ to 1⅛; Penstruthal, 1s. to 3s.; Roman Gravels, 6¼ to 6¾; Tankerville, 2 to 2¼; Tincroft, 9¼ to 10; Van, 18½ to 19⅛; West Assheton, ¾ to 1; West Basset, 3¼ to 3¾; West Chiverton, ⅛ to 1; Almada and Tirito, ⅛ to ¼; Birdseye Creek, ⅜ to ⅝; Blue Tent, 2⅛ to 2¾; Cape Copper, 26 to 28; Chontales, ⅜ to ⅝; Colorado United, 1⅛ to 1¾; Don Pedro, ⅞ to 1; Eberhardt and Aurora, 3¼ to 3½; Exchequer, 3-16 to 5-16; Flagstaff, 3-16 to 5-16; Frontino and Bolivia, 2⅛ to 2⅜; Hultafall, 2¾ to 3; Javali, 4s. to 6s.; Kapanga, ⅜ to ⅝; Last Chance, ⅜ to ⅝; New Quebrada, 1½ to 1¾; Pestarena, 2s. to 4s.; Placerville, 2⅛ to 2¾; Plumas Eureka, 2¼ to 3; Port Phillip, ⅜ to ⅝; Richmond Consolidated, 9⅛ to 9⅜; St. John del Rey, 265 to 275; Sierra Buttes, 1⅞ to 2⅛; South Aurora, ⅛ to ¼; United Mexican, 3 to 3⅛; Oregon, pref., 1⅛ to 2.

At Redruth Ticketing, on Thursday, 1318 tons of copper ore were sold, realising 3882*l.* 8s. 6d. The particulars of the sale were—Average standard, 83*l.* 13s.; average produce, 6¾; average price per ton, 2*l.* 19s.; quantity of fine copper, 89 tons 15 cwts. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Feb. 6	1111	£ 83 6 0	7⅛	£3 3 0	8s. 9d.	£44 10 0
,, 20	23·9	85 13 0	6¼	3 1 0	9 0	45 0 0
Mar. 6	1318	83 13 0	6¾	2 19 0	8 8	43 6 0

Compared with the last sale, the decline has been in the standard 1*l.*, and in the price per ton of ore about 1s. 4d.

WEST TANKERVILLE.—We have much pleasure in referring to the report in another column, from which it will be seen that at this mine (which is about to be taken over by a reconstituted company under the title of East Roman Gravels) a most important discovery has been made. Two tributers cutting into the west side of the main lode at the back of the 75 south have reached a run of lead ore on Laurence's lode worth 4 tons per fathom. This pitch will now be set at 2*l.* per ton dressed ore. The lead sale on February 26 realised 8*l.* 10s per ton for the parcel of 25 tons. The sampling this week is 25 tons blende, and next week 30 tons lead. Should the discovery at the 76 continue behind the workings on the main lode, as it promises to do, the sales will be increased to 35 or 40 tons per month. We understand that about 2500 of the required 3000 shares in the new company are already taken, and there is now no doubt that the remaining 500 will be rapidly subscribed, so that the new work may, with the aid of boring machinery, be vigorously prosecuted.

NORTH TRESKERBY.—Capt. Nancarrow having accepted an appointment in Spain, Capt. Martin George has been appointed agent of this mine.

WEST PATELEY.—The discovery made a fortnight since in the Craven Cross shaft, sinking below the 56 fm. level, or main adit, is this week reported to be fully maintaining its size and value. Mr. David Williams, M.E., the manager, adds:—"A very important feature in connection with the sinking of this shaft is that we have no water rising in the bottom, and only a small quantity going down from the 56 to contend with. Our prospects so far as we have sunk indicate that we are now reaching and skimming the top of another body of profitable ore ground. Some idea of the productiveness of the vein here may be formed from the fact that we have on surface a pile of lead-stuff which will produce upwards of 4 tons of lead ore from this point alone." Other points without change.

SOUTH SETON, near Camborne, for many years under the purserships of Mr. John Tippet, of Truro, and subsequently of Mr. Benjamin Matthews, of St. Day, is to be re-worked vigorously, under the management of Capt J. Nicholls, formerly of Clifford Amalgamated. A 70-inch engine is to be put up at once.

GOLD IN VICTORIA.—From Melbourne (Jan. 25) we learn that the Mining Department estimates the yield of gold for 1878 at 755,754 ounces, showing a decrease of 44,000 ounces as compared with 1877. Recent mining prospects are of a hopeful character.

STEEL RAILS IN THE UNITED STATES.—Advices from Philadelphia state that the demand for steel rails in Pennsylvania exceeds the productive capacity of the mills. One establishment has been under the necessity of declining an order for 20,000 tons.

HULL TRAMWAYS.—The directors of the Hull Street Tramways Company think it only right to intimate to the public that no terms have been made by the Hull and Hessle Tramway Company (Limited) with this company for the use of their system; and, therefore, that company has no means arranged for access to Hull, or any Parliamentary power to make a junction with the existing tramway system in Hull.

The Master of the Rolls (in Chambers) has appointed Mr. F. F. Buffen the official liquidator of the Grafenburg House (Barnet) Hydropathic Establishment.

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PURCHASERS OF
LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, HARD LEAD, BRASS SLAGS AND ASHES, COPPER REGULUS, MATTE, SCORIA, TIN ASHES, TERNE ASHES, &c., and MIXED ORES or REFUSE, containing LEAD, COPPER, TIN, or ANTIMONY.

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AUSTRALIAN TIN—PRIZE MEDAL, 1877.

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LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
March 1	Red Rock	20	£ 7 17 6	Walker, Parker, & Co.
—	ditto	20	7 17 6	Par Smelting Works.
6	Van	500	10 7 6	Panther Lead Co.
7	South Darren	25	14 1 6	A. Eyton.

COPPER ORES.

Sampled Feb. 19, and sold at Tabb's Hotel, Redruth, March 6.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Mellanear	85	£3 2 0	East Pool	49	£1 14 6
ditto	77	2 9 0	ditto	33	1 5 6
ditto	73	2 16 6	West Tolgus	71	3 14 6
ditto	70	2 13 6	ditto	50	4 3 6
ditto	67	4 5 0	ditto	47	5 7 6
ditto	64	2 5 0	West Seton	55	3 16 6
ditto	60	2 9 6	ditto	31	2 16 6
ditto	59	2 11 0	ditto	25	3 1 6
ditto	40	7 7 6	Carn Brea	41	2 13 6
East Pool	68	1 19 6	South Crofty	40	2 6 6
ditto	57	1 18 0	New Cook's Kitchen	32	4 3 0
ditto	56	1 16 6	Penstruthal	11	3 3 0
ditto	52	1 0 0	Rule's Precipitate	1	8 4 0

TOTAL PRODUCE.

Mellanear	600	£1881 6 0	South Crofty	40	£ 93 0 0
East Pool	314	522 2 6	New Cook's Kitch.	32	132 16 0
West Tolgus	168	725 17 0	Penstruthal	11	34 13 0
West Seton	111	374 16 6	Rule's Precipitate	1	8 4 0
Carn Brea	41	109 13 6			

Average standard ..... £ 83 13 0 | Average produce 6¾
Average price per ton £2 19 0
Quantity of ore ..... 1318 | Quantity of fine copper 89 tons 15 cwts.
Amount of money £3882 8 6
LAST SALE.—Average standard ..... £85 13 0 | Average produce 6¾
Standard of corresponding sale last month, £ 83 6 0—Produce, 7⅛

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	240½	£ 613 2 3
Grenfell and Sons	81	403 18 0
Nevill, Druce, and Co.	201½	506 1 0
Williams, Foster, and Co.	614 5 6	1849 19 3
Mason and Elkington	180½	509 8 0
Total	1318	3882 8 6

NO SALE on Thursday next, March 13.

Copper ores for sale at the Royal Hotel, Truro, on Thursday week—Mines and parcels.—Devon Great Consols 847—South Caradon 450—Marke Valley 330—Gunnislake (Clitters) 322—Glasgow Caradon 190—Levant 140—Bedford United 70—East Caradon 30.—Total, 2379 tons.

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

MARYPORT.—The complaint of a subscriber, whose letter bears the Maryport postmark, arises from our utter inability to decipher his signatures. The Journal has been sent each week to various names, beginning with P., S., and J., and supposed likely to be that indicated by the signatures, all of which have been returned. A letter has now been sent with the writing closely imitated. Perhaps we could get into communication if he would send the name and number of the street in which he lives.

Received,—"H. N. J."—"O. P."—"H. W."—"Pen" (Richmond)—"C. M."—"A. S."—"E. R."—"Shareholder" (Penhalls)—"A Tourist"—"Shareholder" (Richmond)—"Stannum"—"Dissent" should address his letter to the secretary. What possible good could result from the publication of such details?—"Sharenolder" (Wheal Basset)—"Euclid" (Bristol)—"Shareholder" (South Frances)—"Mentor"—"N. B.:" We could not undertake the responsibility of such a proceeding—"One Interested" had better obtain the information from our back volumes.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, MARCH 8, 1879.

FOREIGN COMPETITION IN STEEL, IRON, MINERALS, &c.

At the present time more than ordinary attention is being directed to the position of our manufacturers, mineowners, and others in consequence of the increasing competition they are now meeting with in several countries where British goods have had the demand over all others, for continental and American producers are now able to undersell them. But even this unhealthy state of things is not confined to foreign markets, but extends to our own, as is shown by the imports of manufactured iron and steel, as well as other raw and manufactured material. This cannot be said to be the result of superior skill in production or of advanced scientific knowledge, so that we have to look for some other cause for the threatened decline of our manufacturing and commercial pre-eminence abroad. We have hitherto been able to maintain our hold upon foreign markets not only by the superiority of our products, but by their cheapness as well, and so long as we were able to sell below all other competitors we had the command of the markets in nearly all parts of the world, but when other countries entered the lists with us, and sold similar goods to ours at a lower price—as has been the case of late—we find that we are gradually losing some of our oldest and best customers. This serious change cannot be attributed to the desire on the part of our manufacturers to sell only at rates that would leave them a large profit, for it is well known that they have only been anxious to sell at prices such as would save them from actual loss, their object being to keep the markets open to them, so that they might be benefited at a future time. We must, therefore, look in another direction for the successful competition on the part of foreigners. To those who have paid any attention to the subject the reason for our non-success of late abroad is clear, palpable, and stands out in bold relief; it was constantly pointed out, and day after day we have it brought under our notice by the papers published in all parts of the kingdom, in nearly every one of which we find the important heading "Work and Wages," in which strikes form the principal feature.

That this should be so is all the more surprising, considering the commercial crisis the country is now passing through, and the depression which prevails in our most important national industries. A few years ago, when employers and workmen were alike luxuriating in exceptionally large profits and high wages, for the enjoyment of the latter the men considered it necessary to greatly abridge the working hours, and this has continued ever since, to some extent helping to bring about the present depression. And even now they still hold out for short hours for a day's work. They cannot agree to give a helping hand in extricating manufacturers from their present position by accepting lower wages and working longer hours, although by so doing they would themselves be the ultimate gainers, for it is only by such means our trade can be materially increased, and employers placed in a position to meet their foreign rivals abroad, and keep them as well out of our own markets. On the contrary, we have strikes threatened in many directions, and trade, bad as it is, in an unsettled state, as if there were a combination on the part of workmen to destroy our manufacturing and commercial supremacy for the sole benefit of the foreigner. Should this course be persisted in it cannot be otherwise than most disastrous to the working classes, who have certainly suffered a good deal of late. Yet, strange to say, the suffering experienced does not appear to have brought much wisdom with it, nor the lesson taught prevented that selfish policy being pursued on the part of the workmen which looks only to their own present benefit, oblivious of the sacrifices made by their employers to find work for them. Yet in their helpless state these men have been only too glad during the depression of trade to accept of the bounty of their masters to maintain themselves and families, so taking from the capitalists, whom it is their fashion to abuse, money not earned to tide over a season of distress, to some extent caused by the refusal of many of them to go with the times, and make some little sacrifice to enable manufacturers to sell their goods at such a price as to compete with foreigners. They seem to have forgotten that in seasons of prosperity they have shared the advantages with their employers, and that it was only right and just that in periods of depression they should also share a part of the burden with them.

It is true that if we look abroad trade is not in a flourishing state, but the foreign workman labour without grumbling many more hours than his English brethren, accepts considerably lower wages, acts in concert with his employer, and by so doing enables him to compete with English manufacturers in many markets. Taking a favourable view of the English and foreign workmen, we believe it will be found that the latter works nearly one third more hours weekly than the other, and if both received the same amount of wages at the end of the week there would be an overwhelming advantage in favour of the foreign employer. Mr. DAVEY, the well-known engineer, of Leeds, says that the money received for an engine is disbursed by giving 50 per cent. for labour, 40 per cent. for material, and 10 per cent. for capital invested in machinery, &c. Assuming that in France the same money (but in reality it is much less) be paid for 75 hours as we pay for 50 hours, and that the cost of material was the same, the comparison would stand thus—

	Labour.	Material.	Capital.	Total.
England ...	£50 0 ...	£40 0 ...	£10 0 ...	£100 0
France	37 10 ...	40 0 ...	8 10 ...	86 0

Making a difference of 14 per cent. in favour of France in the foreign markets. Again, in Bessemer rails German manufacturers of them have been successful on the Continent, taking contracts at a price considerably lower than they could be supplied by us, leaving profit out of the question altogether, for they are now sold in this country under 5*l.* per ton. Germany also sends to England considerable quantities of pocket knives, scissors, and other hardware goods, at prices considerably below what those of a similar quality can be produced in Sheffield. Belgium, too, favours us with springs considerably lower than they can be made at home. In fact, for some years past there has been a great decline in the export of Sheffield goods to foreign countries, although consumption goes on much as usual. Iron manufactures are now being supplied on the Continent by German and other producers. One of the largest merchants in Birmingham a few years since exported iron and steel manufactures to America to the value of nearly two millions sterling per annum, but at the present time he does not export one shilling's worth, but imports all his goods from America, France, Belgium, and Germany. It is, therefore, not surprising to find our own trade in the depressed state it is, seeing that whilst our exports have fallen off our imports have greatly increased. In 1873 we only imported 614,358 cwts. of iron and steel manufactures, but in 1878 these imports had increased to 2,119,000 cwts. Taking goods of every description, we find that we now import four times as much in value as we did ten years ago, whilst there has been a great decrease in our exports.

These are truths that should be well weighed and digested by our English workmen, who are so particularly nice as to the number of hours they work, so different to those on the Continent. An illustration of this, as well as of the great progress that is being made by continental iron manufacturers in supplanting our own, is supplied by a letter recently written by Mr. JOHN BURNS, of the Cunard Steamship Company, the object of which he says is to ask the British workman to take to heart what came under his own personal knowledge so recently as the 22nd ult., whilst inspecting the work done on board the steamer Gallia. He states that the vessel is being supplied with parquetry made in Belgium, being laid by Belgian workmen, and who on Saturday were faithfully and diligently working when at one o'clock, the hour at which the home workmen leave the ship, the Belgians asked to be allowed to continue their work until dark, their sole object being to get the work done without delay. These men were not paid overtime, and only received reasonable wages for their labour. Mr. BURNS states that the ironwork of the office in which he sat was made in Belgium. He also remarks that the "doctrine telling the working man that he shall not work more than 51 hours a week is nuts for the foreigner to crack, and is ruining our country and our countrymen."

The time has certainly arrived when our British workmen will have to adopt some new course if they intend securing anything like the trade they have had, for as they are now acting they are simply playing into the hands of the foreigners. As to our iron and steel manufactures, this can only be accomplished by working longer hours, and going hand in hand with their employers. Labour is the capital of our workers, and, like cash capital, the more they give of it the more productive it will ultimately become. If they prefer to work short hours whilst foreigners are doing quite the contrary, then they will find when too late that work will leave them, and that they have succeeded by their folly in driving away the trade of the country, and giving it to those who will be only too glad to receive it, and endeavour to keep it.

With respect to coal, Germany, which has long been one of our best customers, is fast developing her own resources, and during the latter part of last year there was a considerable increase in the output in the upper districts of Dortmund. The German colliery owners are now working hard to supersede English coal in several parts of the Continent. And here, again, it may be said much will depend on the conduct of our English colliers if we are to maintain our position in several of the European markets where our coal has long been used. Price, of course, will be everything, so that to maintain our present position it is necessary that the miner and his employer should work most cordially together, seeing that their interests are identical. The coal miners throughout the country should not forget that it was high wages which six or seven years ago attracted so many labourers to the collieries, and that it was short hours which led to the production of coal being much less than the consumption, and the consequent opening out of so many new mines, causing wages to come down to a very low point, owing to the productive power of the country being much greater than the home and foreign requirements. By working (say) nine hours a day instead of eight our colliery owners would be able to hold their own in the foreign markets, and this is an important consideration, seeing that fully one-ninth of all the coal raised in the kingdom is sent abroad. The only advantage the foreign employer has over his English rival is the long hours which the workmen labour for moderate wages, and if we are to recover anything like our former prosperity it will be by our workmen adopting the same course as regards the hours of labour. If they do not then their self-imposed restriction will culminate in a still greater loss of trade, and steep them in a depth of poverty, from which there will be no escape, far lower than has yet been the lot of British workmen. This is not the mere view of an individual but is a reflex of the opinions of those who are deeply interested in the prosperity of our trade at home and abroad, and in the welfare of our working classes as well.

IMPROVING PROSPECTS OF THE IRON TRADE.

Some circumstances which have just transpired in Cleveland seem to indicate that, with the disappearance of a very severe and prolonged winter, an improvement is taking place in the iron trade of the north-eastern counties. Thus orders for between 5000 tons and 6000 tons of iron bowl sleepers have been received from the East Indian Railway Company and the Bombay, Baroda, and Central India Railway Company. But better still, Messrs. BOLCKOW, VAUGHAN, and Co. (Limited), have obtained an order for 15,000 tons of steel rails for Australia and New Zealand. This latter order will keep the vast works of the company at Eston in full operation for some time to come. Pig-iron has also experienced a slight advance in Cleveland. It is true that this advance is not material, and does not exceed 1s. per ton; but prices have been so long declining that even a recovery of 1s. per ton has been received with much satisfaction. The question, indeed, which now awaits consideration is whether we have not happily at last reached the turn of the tide which has been so long setting so persistently against all engaged in the iron manufacture. We have frequently insisted upon the importance of the colonial demand, and it has certainly come bravely of late to the assistance of our ironmasters. The death of SHERE ALI and the friendly letter which YAKOOB KHAN has addressed to Lord LYTTON induce some hopes that a change may now be witnessed in the relations existing between Great Britain and Afghanistan—a change which may prove to be nothing more or less but the restoration of peace. If this happy result should be attained, the revenues of India will be relieved of the great strain which they have now to sustain, and the work of State railway construction may be resumed with a certain amount of energy. As regards the demand for our rails in Australia and New Zealand, those important dependencies are not exactly in a prosperous condition in consequence of the low rates current for wool, and also in consequence, so far as Australia is concerned, of a prolonged drought. Still wealth and population are growing and accumulating more and more at the Antipodes; and as the various Australasian Governments enjoy a good credit upon the London market, they are induced to proceed with considerable vigour with the establishment of modern means of communication.

But, as we have already observed, the question is whether affairs are not experiencing some improvement in the coal and iron trades. We say the coal and iron trades, because anything which benefited the iron trade would be tolerably certain to react favourably upon the coal trade. The remarkable cheapness of iron and steel ought, in the natural course of events, to induce a greater demand for those commodities; and this demand appears to be at last setting in. We regard the order which Messrs. BOLCKOW, VAUGHAN, and Co. (Limited) have secured for 15,000 tons of rails for the Antipodean settlements as at once a remarkable and an encouraging one. It would seem to show that the Australias are taking the place as consumers of our iron which was once occupied by the United States. One great cause of the troubles which have afflicted the English, Welsh, and Scotch iron trade since 1873 has been the loss of the American market for our rails. The American railroad panic of 1873, the growth of American metallurgy, and the imposition of a high Protectionist—not to say prohibitory—tariff by the Congress of the United States have all been most trying circumstances for our ironmasters and iron companies, and have forced prices down to a sadly unremunerative level. But there is generally some compensating circumstance associated with every difficulty and misfortune, and this has proved to be the case in this instance. If prices have fallen to an unremunerative level in the iron trade the fact has, at any rate, stimulated the colonial demand; and with the help of this demand a reduction in the cost of production (such as is now assured by the cheaper rates current for raw materials and the reduced wages paid for labour), and a little improvement in quotations, there may be materially better times in store for those engaged in the British iron manufacture. We can only sincerely trust that this may prove to be the case.

COLLIERY EXPLOSIONS AND COAL DUST.

For a considerable time past a series of elaborate experiments have been made by Mr. MORRISON, of Newcastle, for the purpose of proving whether coal dust will fire at a safety-lamp or not, and it is now stated that the fine particles will burn when in contact with the flame, and by so doing they lead to an explosion. This, it may be said, was the opinion of several colliery viewers; but it was left for Mr. MORRISON practically to test the matter, which he appears to have done successfully. We alluded to the subject some time since, and expressed an opinion in favour of the conclusion arrived at by Mr. MORRISON, for we see that in ordinary grates when finely powdered coal is put on to a hot fire it ignites almost as rapidly as gunpowder. We have, consequently, another hidden source of danger brought to light in connection with colliery accidents, and it is quite probable that this coal dust may have been the cause of some of those explosions which have never been accounted for. This view was suggested to us some time since by Mr. WILSON, of the Oaks Colliery, where some of the most destructive explosions known had taken place, who had himself made some experiments. He considered that it was quite probable a lamp in a very dry and dusty part of a mine can be so impregnated with fine dust that when an explosion takes place after the firing of a shot, or owing to a heavy fall in the goaf, which always causes a concussion of the air, the flame will be drawn and explode the dust on the external part of the lamp. In some of our mines the fine particles of dust are constantly floating about, and, of course, they would assist most materially in adding and giving strength to the deposit on the lamp itself. Some force is given to this view by the fact that some of the most terrible of our explosions have taken place in very dry mines.

After an explosion, too, it is frequently found that extensive fires take place, and which are extinguished with great difficulty; and these fires, it is maintained by many of our mining engineers, are caused, in the first instance, by the fine coal dust. The Oaks Colliery is and was a perfectly dry one, so much so that even at the present time it is found necessary to keep the roads and other places constantly watered, for it has been found that the dust interferes with the ventilation very much. This is another point that has not had much attention paid to it; but it is one so feasible that it ought to recommend itself to the attention of colliery managers desirous of adopting every means to prevent an explosion, or maintaining the ventilation of the working places. Then, the dust must be most injurious to the workmen, who must of necessity swallow a great deal of it, and persons who have only paid an occasional visit to a dry mine will find that they inhaled a good deal of dust that will take two or three days to get thoroughly rid of. This at least has been our own experience, and we believe that of many others as well. But the injurious effect of the fine dust can be carried a great deal farther than most persons connected with mines have thought of. Mr. WILSON, who has had a long experience in some of the fieriest mines in South Yorkshire, as well as in the North of England, gives it as his opinion that more persons have been killed by the dust in a dry pit after an explosion than has been taken into consideration by colliery managers. Many of the dead after an explosion he had found with their ears, eyes, and noses completely filled with dust—so that it is quite possible that the cause of death was suffocation.

The question as to the different effects of fine dust in coal mines in relation to explosions, and the ventilation as well as regards the health of the workmen, is one that has not been much ventilated, yet it is evident that it is a most important one. It is, therefore, to be hoped, now that it has been brought forward prominently, that we shall hear a great deal more about it, and that our managers of mines will give that attention to it which it undoubtedly deserves. Anything which tends to prevent the loss of life from explosions or can improve the ventilation of mines is of national importance, and should not be overlooked by those in whose hands are placed the lives of vast bodies of men, who, under the most favourable circumstances, have to work in an atmosphere and surroundings as unpleasant as can well be conceived.

COLLIERY EXPLOSION NEAR WAKEFIELD.

In no part of the West Riding coal field has there been greater immunity from colliery explosions than in the Wakefield district, where the coal gives off considerably less gas than that worked in the neighbourhood of Barnsley. But it is evident that nearly all mining localities are liable to such catastrophes, so that actual safety is out of the question, rendering the greatest vigilance at all times necessary, seeing that gas at times suddenly breaks out where least expected. The most recent disaster took place about 10 o'clock on Tuesday night, fortunately a time when but comparatively few persons were at work, at what is known as the Deep Drop Pit, belonging to Messrs. HUDSON and Co., and situate a short distance from Wakefield. The seam of coal worked was the well-known Silkstone, which contains a great deal of gas, so that the work was carried on by means of safety-lamps. The men had just got into full operation when a loud explosion occurred, which at once told those above ground what had taken place. On some persons descending they found the usual impediments blocking the roads. There was fallen roof, shattered corfs, and coal rendering access to where the men had been working a matter of considerable difficulty. Some of the men, however, managed to reach the bottom, and at once signalled for the cage to be drawn up. This was done quickly, and the cage brought up six men and boys, who stated that an explosion had taken place. Medical aid was at once sent for, and a party of explorers having been formed, along with Dr. HEFFERNAN, they descended the shaft. After proceeding for some distance in the direction of the west board, they found a man by the named NOBLE lying down, but still alive. He was at once conveyed to the Clayton Hospital at Wakefield, where he received every attention. For a long time the exploring party worked manfully to reach the west bord where the occurrence took place, and which is about ½ mile from the pit's bottom. Singular to say, the men working in other parts of the pit for a long time after the explosion were not aware of what had happened, and kept on working as usual. A lad named MUSGREAVE who was some distance from the west bord, in what is known as the drift, engaged in greasing the wheels of a corf, was blown a distance of several yards, and was found dead, with his head tightly jammed into one of the wheels. The result of the explosion was that 20 persons were killed, fifteen men and five boys, eight of the men being married, and leave widows and young families.

It would be premature as yet to speculate on the cause of the explosion, for safety-lamps are not always a preventive, although many men labour under the belief that with the "Georgy" with them they are shielded from all danger. But that there must have been a naked light is an indisputable fact, but whether there was a defective or an opened lamp, or whether blasting was carried on, are matters that will have to be enquired into. But, as we have so frequently pointed out, it generally happens that those who could throw any light as to the cause of the explosion are generally numbered with the dead, and it is very likely that this will be the case at Wakefield.

The year has certainly opened out most unfortunately, for explosions, attended with loss of life, here take place in each of three months, although we have only just entered upon the last one. In January there was an explosion at the Dinas Colliery, in South Wales, by which 63 lives were lost. In February another similar occurrence took place at the Hemsworth Colliery, near Pontefract, where five men were killed, and now we have another in the first week of March at Wakefield, resulting in the death of 20 persons. So far in the present year we have thus to record the deaths of 88 persons by colliery explosions. This is certainly a bad and calamitous beginning, but it is to be hoped that it will have the effect of causing colliery managers in all parts of the kingdom to take

every possible precautionary measure to ensure the safety of those working underground.

EXCLUSION OF EXPLOSIVES FROM MINES.

The desirability of prohibiting the use of gunpowder, dynamite, and all similar explosives has long been acknowledged, but there has been a general disinclination to take any decisive steps in the matter, owing to no satisfactory substitute having been suggested. From the report of the Manchester Geological Society meeting, published in last week's Journal, it appeared, however, that at least in one mine experiments had been made which led the proprietors to conclude that compressed air could be successfully employed. The practical men, and especially the Government Inspectors, did not appear to agree entirely with this view; and it was stated by Mr. HALL that the pressure of 9000 lbs. per square inch, assumed by the author of the paper to be sufficient, would fail to bring down hard coal; whilst Mr. WOODWARD stated that the greatest pressure that had been attained in the experiments was not equal to that of the commonest gunpowder; and the Chairman (Mr. DICKINSON) said that there were persons besides Mr. GARFORTH who were seriously of opinion that gunpowder would be prohibited in mines, but he had not brought his mind to that opinion. Even Mr. GARFORTH acknowledged that the cost would be more than gunpowder, but contended that the increased safety counterbalanced this. Most practical miners entertained, and certainly not without much reason, the opinion that to attempt to carry on mining without explosives is much like attempting to carry on warfare with the same restriction; and it is beyond question that with care and good management the miner is as competent to handle explosives underground without danger to himself and his fellow workmen as is the soldier to handle his rifle without shooting himself or comrades. The suggestions to prohibit the use of explosives usually come from those who have had but little underground experience, or who are such bad disciplinarians that their pits are unsafe to enter under any circumstances whatever.

But apart from the consideration of the practicability of using compressed air in the manner described, it appears that Messrs. GARFORTH are not entitled to the credit of having invented it, and that they have merely been testing Mr. SAMUEL MARSH's invention, patented in December, 1876, and which had been previously explained by the inventor to Mr. W. E. GARFORTH. Mr. MARSH'S specification states that the invention consists—first, in forming holes in the coal or other material to be disintegrated, and inserting and securing therein a cartridge or cartridges after the manner of blasting by the aid of gunpowder or other inflammable explosives, and charging the said cartridge or cartridges with compressed air or other elastic fluid until explosion takes place by either forcing such air or other elastic fluid thereinto directly by means of a pumping apparatus, constructed and arranged as the inventor describes, or through the intervention of a portable receptacle or receptacles charged with such air or other elastic fluid to the requisite elevated pressure by means of the said pumping apparatus. The pumps may be actuated from a shaft by cranks or eccentrics, the connecting rods from which are attached to the connections with the pump pistons or plungers at a maximum distance from the said shaft in order to obtain the requisite equability of motion, whilst the minimum distance admissible is maintained between such shaft and the adjacent extremities of the pump cylinders or barrels, so as to economise space. The other portions of the invention do not affect the method used by Messrs, GARFORTH, but this will suffice to show that it is Mr. MARSH's invention which has been used. The specification is accompanied by ample drawings to make every detail clear.

COAL WINNING AT THE HARRIS NAVIGATION COLLIERY.

One of the most important mining operations which have ever been undertaken in South Wales was last week brought to a successful issue, by the coal being won at the Harris Navigation Colliery. The great depth at which it was believed the coal existed—the length of time which the sinking operations have occupied—and the difficulties which have had to be overcome—all contributed to invest this colliery with a special interest and curiosity amongst those concerned in mining matters. The announcement of the coal having at length been won will be a matter of satisfaction to many besides those more immediately concerned.

The celebrated Four-feet Seam of coal has been struck at the enormous depth of 692 yards—or more than double the average depth of local collieries. The vein proves to be 5 ft. 10 in. thick, and it is found to possess all those fine qualities which have rendered the Four-feet vein worked in the adjoining properties of Messrs. Nixon, Taylor, and Cory, by which this property is bounded to the north and west, so exceptionally prized for steam navigation purposes. The geological conditions are also of the most satisfactory character.

The sinking operations have been proceeding vigorously for upwards of six years. Two pits are being sunk, each of unusual size—17 ft. in diameter. The coal has been struck in the south pit, which is about 70 yards distant from the north pit, and is somewhat more advanced than the latter pit. Some little time will necessarily elapse before the workings will permit of any considerable output of coal, but it is anticipated that a large daily output will be secured within four or five months, and that before long the colliery will be capable of an output of about 2000 tons per day.

The colliery has an area of over 3000 acres. The area is almost square in form, and about two miles from east to west by two and a half miles from north to south. Three railways run over the property—the Taff Vale, Great Western, and Taff Bargoed lines. The colliery is not only advantageously placed as regards nearness to the port of Cardiff, but it is also in an excellent position for railway communication with Liverpool. Amongst other features of the sinking we may state that upwards of 200 yards of Pennant rock had to be pierced, and another matter of interest has been the working of a very large Cornish pumping engine with a cylinder of 100 in., it being the largest pumping engine in South Wales.

The management of the company in London has been in the hands of a board of directors, of which Mr. F. W. Harris (of Dixon and Harris, Gracechurch-street) is Chairman. The local management has been in the hands of Mr. Rees Jones, of Cardiff. The sinking and engineering arrangements, which have been so successfully carried out, have been in the entire charge of Messrs. Brown and Adams, Cardiff, the resident mechanical engineer being Mr. W. Beith.

THE ROYAL COMMISSION ON MINING ACCIDENTS.—We announced last week that at the first meeting Mr. Warington Smyth had been appointed Chairman. The principal business related to the selection of a secretary, for which post there were a large number of applicants. There was considerable diversity of opinion as to the best man for the position, some of the members favouring the appointment of a mining engineer, others of a journalist accustomed to mining accidents, and others of a barrister. The selection was ultimately deferred to a future day. The work of the Commission is expected to last two years.—[We since learn that Mr. Arthur Williams, barrister, of the South Wales Circuit, is likely to be appointed the secretary. The appointment would be a very good one, for Mr. Williams is well up in mining science.]

SOCIETY OF ARTS.—The Council of the Society of Arts at their meeting on Monday appointed Mr. H. Trueman Wood secretary, in the place of the late Mr. P. Le Neve Foster.

COPPER MINING ON LAKE SUPERIOR.—Although comparatively little has recently been heard in London about the copper mines of Lake Superior it appears that their productiveness and prosperity continue. In the counties of Houghton, Keweenaw, Ontonagon, and Isle Royale, Michigan, 37 copper mines were in operation during 1878. The output exceeded by 20,000 tons the yield of any previous year. More than half the entire product came from the Hecla and Calumet Mine. This mine employs regularly about 2000 men, and each successive year shows a larger product. Last year it turned out 12,500 tons of refined copper, worth over $4 000,000. The mine was opened in 1868, and has already divided among its shareholders $14,650,000, retaining a surplus of $3,000,000. The Quincy Company has declared a dividend of $1 per share, payable on Feb. 15. It is stated that the mine will show as the result of operations in 1878 a net earning of $45,000. This company under the old organisation of 20,000 shares paid $2,230.000 in dividends, and the above dividend is the first since reorganisation, and will make a total of $2,270,000 which Quincy has distributed up to date. The Calumet and Hecla has also declared a dividend of $5 per share, payable on Feb. 15.

REPORT FROM CORNWALL.

March 6.—Probably the most significant sign of the times is the statement made by Capt. Teague at Tincroft account on Monday, that he had been offered an advance on the improved prices for all the tin he can raise for the next five years. Capt. Teague, however, is far too shrewd a man of business to tie himself down in that way. He prefers to wait, and so will all mine managers, for there is a universal agreement that the "good time coming," which we have been so long looking for, has really come at last. No one now can entertain the shadow of a doubt that the old country has won in the desperate struggle. The pinch has been a severe one, but as we have over and over again pointed out, it has taught us a lesson well worth the learning—the lesson of improvement and economy. We shall do well now, at the rates at which tin is being raised here, at prices which meant ruin a few years ago, and which would never tempt either Australia or Tasmania into the field again. "Once bitten twice shy," as the old proverb runs. Cornwall has not known what it is to be beaten. In spite of all hindrances and difficulties she has struggled on, until, as Capt. Teague's statement shows, even our friends the smelters not only have faith, but are willing to show their faith by their works. We anticipate with no little confidence that ere Midsummer we shall have a large accession to our prospective if not actual dividend mines, by the great proportionate increase of those that will at least be meeting cost.

The turn has not come one whit too soon. It is really heart-rending to read of, and much more so to witness, the dire distress that is existing in several localities—distress which the efforts of the county committee may alleviate for a while, but which can only be got rid of by a permanent increase in the means of employment. Do what we will in other directions we can only after all apply palliatives. It is to revival of mining that we must chiefly look. May we not hope that this is not far distant? Meanwhile general trade is at a lower ebb than ever.

We have not yet seen the last of the effects of our local bank failures, and the results of the collapse of what was believed to be the magnificent business connection of Sir F. M. Williams. The Helston Union Bank will pay a good dividend. It appears to have been insolvent for years, the result of the action and deficiencies of those who in former days were connected with it. For years it seems, too, that the whole efforts of Mrs. Vivian and her son have been devoted to reducing its liabilities, working on against the heavy load in the hope that matters might be mended somewhat before the crash came. Nothing could be more plucky and more honourable than their conduct. That Mrs. Vivian should have to bear such a burden at the age of 85, and should have borne up under it so well and so unflinchingly, does her the highest credit, and there can be nothing but the deepest and truest sympathy for her. Both she and Mr. Vivian suffer from no fault of their own, and they have the consolation of knowing that they have minimised the evil to the utmost of their power.

As was rumoured would be the case, the Cornish Bank is to be resuscitated, and there is little doubt that, notwithstanding the new entrants into the field since Messrs. Tweedy and Williams stopped, it will secure a fair share of business, though we may wonder what Cornwall does with so many banks more in proportion to the population than can be found elsewhere in the kingdom. Capt. Teague is the largest shareholder of the new company, having taken 500 shares. He is an excellent man of business in other ways, as everybody in Cornwall knows, and he has not taken this step without due consideration.

SALE AT WEST GODOLPHIN.—Mr. A. Berryman sold the machinery and materials of West Godolphin, near Marazion, on Monday, and was favoured with a good attendance and spirited biddings. The whole was put up in one lot, but was bought in at 2000*l.*, the only bid being 1000*l.* by Harvey and Co. The 60-inch cylinder pumping engine was bought by Harvey and Co., for 500*l.*, and the cast-iron balance bob, &c., sold well. The 30-inch cylinder pumping-engine, and the 14-inch winding engine, were also enquired for, and will probably go. The two 11-ton boilers and fittings fetched 61*l.* each, the 10-ton 51*l.*, and the 9-ton 45*l.* The great majority of the lots (nearly 900) were disposed of, and the remainder will be advertised for sale in about a fortnight. Meanwhile, the auctioneer and resident agent are prepared to treat for sale by private contract. The iron fetched on an average a rather better price than has been given lately at auction. Messrs. N. Holman and Sons were large buyers, and Wheal Agar, Wheal Basset, and other mines were represented among the purchasers.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

March 6.—A better tone is this week observable in the iron market. The improvement is chiefly seen in regard to pigs, which are decidedly stronger in price, as they are influenced by the rise in the Cleveland district. Common pig makers are mostly benefited, and the competition from Northern producers being for the time less severe, some of them are attempting to secure an advance of 2s. 6d. a ton. As their stocks are heavy, however, it is questionable whether they will be able to maintain the higher rates. Finished iron is in slightly better request. Those mills and forges are doing best where iron of a high-class sort is rolled. Prices for marked iron remain upon the basis of 7*l.* 10s. for bars. As low a figure as 5*l.* 10s. occasionally rules transactions in bars of a minimum quality. Coal is in supply in excess of requirement, and this condition is now becoming noticeable in respect of the household qualities, as well as of furnace and forge sorts. For manufacturing fuel prices do not certainly tend upwards, but if the iron trade should revive better things may quickly be expected. The colliers of the New British Iron Company still refuse to work more than eight hours a day. The places of many of them are, however, being gradually filled up by other men who are agreeing to certain new working arrangements.

At an adjourned meeting of the creditors of Thomas Southan and Co., of the New-Side Ironworks, Walsall, it has been resolved, after receiving the report of the committee of inspection appointed at the first meeting, to wind up the estate in liquidation.

At a meeting of the South Staffordshire Mines Drainage Commissioners, held in Wolverhampton on Wednesday, Mr. Henry John Marten, C.E., of Wolverhampton and London, was unanimously appointed one of the statutory arbitrators, in the room of Mr. Woodhouse, the eminent mining engineer, who died last autumn. The Court of Arbitrators under the South Staffordshire Mines Drainage Act now consists of Mr. G. M. Dowdeswell, Q.C., one of the official referees under the Judicature Act; Mr. Thomas Hawksley, C.E., past President of the Institution of Civil Engineers; and Mr. Marten. The newly-appointed arbitrator is a brother of Mr. A. G. Marten, Q.C., the member for Cambridge.

An illustration of the extent of the depression in trade during the past year is afforded in the circumstance that there has been during 1878 a falling off in the revenue of the Birmingham Canal Navigation Company, from tonnage tolls, and wharfage, of 13,753*l.* as compared with the previous year. The usual dividend of 2 per cent. for the past half-year has been declared.

The Birmingham and Wolverhampton Chambers of Commerce held their annual meetings on Saturday. As to trade prospects the Council of the Birmingham Chamber reported that they saw no hope of permanent improvement until peace and order were established throughout the countries of the world, which had been disturbed by many causes that were mentioned. The Wolverhampton Council saw no indication of a probable sudden revival of trade, nor was such a condition desirable. A gradual and steady improvement would be the best guarantee of further progress and eventual permanence. They hoped that before the close of the present year a gradual improvement would be perceptible. Mr. P. H. Muntz, M.P., president of the Birmingham Chamber, said he could see clearly that we had not yet arrived at the bottom of our prices. It is satisfactory that at both meetings reciprocity tendencies amongst commercial men were condemned,

The North Staffordshire Coal Trade is somewhat improved, and more activity is to be seen at the pits. Prices are pretty fairly upheld for manufacturing sorts at from 7s. 6d. to 9s., and for domestic sorts about 12s. 6d for lumps at the pit's mouth. The pig-iron trade is very dull, but in the finished iron business there is a little more movement, particularly as to plates.

At the Wednesbury Police Court, on Tuesday, Isaiah Short, one of the owners of the Ebenezer Colliery, West Bromwich, was summoned at the instance of the Inspector of Mines for neglecting the provisions of the 29th general rule of the Mines Regulation Act, which provides for the appointment of a competent person to examine the machinery, head gear, and working places every 24 hours, and make a report in a book. Defendant was fined 40s. and costs. For a breach of the same rule, Isaac White, the certificated manager of the Golds Green Colliery, was fined 5*l.* and costs.

The directors of Muntz's Metal Company (Limited) have resolved to recommend a dividend for the past year at the rate of 10 per cent. per annum, carrying forward a considerable sum to the credit of next year's revenue.

SALE OF SHARES.—A sale of valuable shares took place at Messrs. Ludlow, Roberts, and Weller's sale room, New-street, on Monday. Twenty-five shares of the Birmingham Joint-Stock Bank (Limited) were first put up in four lots, the purchaser of the first lot having the option of taking the whole number at the same price. A short but spirited competition took place, and the 25 shares were disposed of to one purchaser at 32*l.* 10s. per share. Seven shares in Lloyds Banking Company (Limited) realised 24*l.* 12s. 6d. per share; sixty shares in the Birmingham Banking Company (Limited) went in one lot at 16*l.* 2s. 6d. per share; eight shares in the Worcester City and County Bank (Limited) were sold for 22*l.* 10s. per share, and 17 more for 22*l.* 7s. 6d. Six Birmingham and Midland Bank shares realised 83*l.* per share; ten shares of the Nottingham Joint-Stock Bank (Limited) 10*l.* 2s. 6d. each. Fifty fully paid up shares of the Birmingham Bolt and Nut Company (Limited) called forth a bid of only 2*l.* per share, and were withdrawn, as were also fifty others on which 4*l.* was paid up, and for which there was no offer. Two paid up shares in the Mossley Skating Rink Company (Limited) were sold for 7s. 15s. the two. Some shares in the Val de Travers Paving Company (2*l.* 15s. paid up), in the Howe Sewing Machine Company (Limited) (fully paid up), and in the Spon Lane Colliery Company (Limited), were offered, but there was no bid for them. There was 5000*l.* in the Birmingham Corporation Gas Annuities sold in one lot at the rate of 25*l.* for every 1*l.* of dividend.

TRADE OF THE TYNE AND WEAR.

March 5.—It is quite true that business is increasing as the spring trade is setting in, the Baltic and ports in Northern Europe are more open, and the demand for coal, iron, and other staple products of the district is, of course, considerably increased; but whether this increase will lead to anything like fair employment for the coal and iron works is another question. It is, however, held in some quarters that a real revival of trade has set in. Shipments of coal have again been considerable, but only part of the works in those rivers are fully employed—that is the best works for first-class house, steam, and gas coals. Another attempt is being made to sell gas coal from this district in America; indeed, a contract has been entered into by a firm at Hartlepool to deliver gas coal at Boston, and one cargo of 1200 tons has already been sent there. The contract was tendered for by United States agents, but the Durham firm has, in spite of the import duty, secured the contract; of course, the price is very low, and the profit small, but if it is found to be possible to do this business it is evident that the result may prove highly beneficial to the mineral trade of this district. It is now pretty well understood as a fact that good times can only be brought about again by producing good articles at a cheap rate, and the producers in the North of England are now in a position to sell coal, iron, and steel—raw and manufactured—at a price that must enable them to compete with any other district or country.

The demand for pig-iron increases, and an advance of 1s. per ton has again been made. The strike of iron shipbuilders has had a bad effect in the manufacturing iron trade, as makers who produce angle iron, plates, &c., have in some cases suspended operations, and this has again reduced the demand for coals. It is evident the downward movement of wages is arrested at intervals by the action of Trades Unions, though the movement cannot be prevented until a revival of trade is assured. The dispute between the Durham Coalowners' Association and the Miners' Union has not yet been adjusted. The proposal of the masters to have a reduction of 10 per cent. immediate, and refer the other reduction of 10 per cent. to arbitration, has been refused by the men, who propose instead to refer the whole matter to arbitration. However, this proposal is not likely to be acceded to by the masters, who will probably issue notice for a large reduction very shortly. The chemical trade is firm, and prices are improving; the prospect for this important trade is much improved. The latest news to hand shows that the strike of iron shipbuilders in the Tyne is about closed, as the parties have agreed at all the principal yards.

At the Northern Institute of Mining and Mechanical Engineers' meeting, held on Saturday, there was a good attendance of members, and a very interesting meeting was held, the subjects brought forward being varied and interesting. Mr. W. Cockrane, Vice-President, in the chair. Mr. D. P. Morrison, Newcastle, read a paper "On Schmitt's Revolving Screen," which he described as being simply a long strip of plate, perforated throughout its length with holes of different sizes, according to the sizes into which the coal is required to be separated. The strip is about 54 ft. long and 4 ft. wide, and being wound into a spiral, and the ends closed and mounted on a central axle, forms the spiral screen. The screen has been introduced in the coal districts of Germany with great success. The chief advantages are—1. The cost is less than that of ordinary revolving screens, and the space occupied in proportion to the work done is very much less.—2. The coal is not broken nearly so much as in ordinary revolving screens, while the screening into the required sizes is most efficiently done.—3. The construction is simple and strong, all parts being readily accessible and easily repaired.—4. The power required to drive it is less than with ordinary revolving screens, as the material being screened is more distributed, and does not lie at the bottom of the screen. The speed to deliver 400 tons of coal in 10 hours is from 10 to 18 revolutions per minute, but in dealing with very soft or tender coal a slower speed is preferred. The principle of the screen has also been successfully adopted for sorting ores into various sizes. Mr. David Burns, Haltwhistle, read a paper "On the Supply of Pure Water and Motive Power to Centres of Population." The purpose of the writer was to bring before the Institute a scheme whereby the supply of water could be greatly improved, and the consumption of coal, with its concomitant evils of smoke, explosions, and fires, be considerably lessened in all large towns. For instance, referring to Newcastle, there issues near the crest of Cross Fell a spring, called the Gentlemen's Well, which yields on an average all the year round 50 gallons a minute of most excellent water. It issues at an elevation of about 2750 ft. above the sea level, and if its water were conducted into a pipe so large as to lose no perceptible head from fluid friction, and carried down to this town, it would supply 2400 with 30 gallons a day each, and give out a motive power of 39·4 horses, at an elevation of 150 ft. above the level of the sea. It would be seen from this illustration what an immense store of motive-power was allowed to run to waste; and to lead the Gentlemen's Well down to Newcastle in a pipe, and so supply it in its original purity, was more philosophical than to allow it to spend its energy running down the valley of the Tyne, picking up sewage here and dilute manure there, and then to pump it up at great expense to supply the inhabitants of Newcastle with but indifferent drinking water. The scheme which the author submitted was to collect all the available springs within the watershed at their outflow, so as to keep them pure and make available the potential energy of their waters due to their respective heights, which energy might be supplemented by using windmills at convenient points, and water-wheels on the various streams. He elaborated his scheme, one position of which was to

construct galleries in the sides of hills where springs were found, and then collect all into one reservoir, from which motive-power and household purposes would be supplied. The author submitted the following advantages by his scheme:—1. The ground occupied by the present system of large reservoirs would be nearly entirely saved.—2. The expense of making reservoirs and long water races would be largely avoided.—3. The water available would not be left to evaporate in open reservoirs.—4. The water would not be contaminated with peaty and soluble nitrogenous matter, nor exposed to the heat of the sun; indeed, pure spring water alone would then be supplied to the town, and all the filtration would be avoided.—5. All pumping by steam would be avoided.—6. By covering the service reservoirs the water would be effectively protected from the extremes of temperature.—7. An amount of power sufficient in many cases to light the whole town, and do the work of many small steam engines, might be obtained. Mr. D. P. Morrison made an addition to his paper read at a former meeting "On Rigg and Meiklejon's Coal-Cutting Machine." Since reading the paper he had been in Scotland and seen the machine at work, and his opinions and statistics on the subject have been very much modified, but in a most favourable way, and he had found now that the machine was worked at less than half the cost of hewing by hand. —In a discussion which ensued it was stated that the machine would enable thin seams in this district to be worked at a profit, while they would be totally unworkable by hand hewing.—A hearty vote of thanks was given to each of the writers of the papers.

The great iron and coal company of Bolckow, Vaughan, and Co. (Limited) are enabled to declare a dividend of 5 per cent. upon last year's working. In addition to their steelworks at Eston, which are turning out 2000 tons of steel rails per week, they are converting their Middlesborough ironworks for steel-making. They have already taken orders to to the extent of 35,000 tons of steel rails, and will, therefore, be well employed for some months. The question of steel-making from Spanish or Cumberland ores is engaging the attention of several firms in the North of England, especially as steel is coming so much into use, not merely for railway purposes but for shipbuilding. Another order for a steel-built ship was lately given out on the Tyne by a firm who have been well satisfied with the trial of a steel-built ship for some time in use.

The market at Middlesborough on Tuesday was much more animated. Merchants are endeavouring to buy iron at about 34s. net, No. 3, but makers, unless in exceptional cases, will not sell below 35s., less 1 per cent., and some even ask more. No. 4 forge has been done at about 33s. 9d. net, there being less enquiry for that class of iron than was lately the case. The merchants state that they can can buy No. 3 at 6d. per ton below the makers' quotations, but very few makers are prepared to sell below the figure given—35s. The stock returns are not yet out. They are expected to show some reduction on January, as towards the latter part of last month a very considerable quantity of iron went out of makers' hands for inland, foreign, and local account, and for delivery to Scotland. Though somewhat less than the two preceding weeks, the deliveries to Scotland last week exceeded 6300 tons, and sellers depend upon a good trade being done not only with Scotland but with Germany during the present month. It is too early yet to decide whether the improvement which has sprung up in the pig metal trade will be confirmed and further developed as the season comes on. After such a long and continued downward movement the reaction in the market, small though it be, is a welcome relief, and tends to inspirit makers. Both for Staffordshire and Lancashire there has lately been a good requirement for Cleveland pig metal. The steel trade is brisker, and after the receipt of the late orders for Italy, New Zealand, and India, though 2000 tons of steel rails per week are turned out, Bolckow, Vaughan, and Co.'s works will be fully engaged for some months to come. There are other orders for steel rails in the market. There is a great deal of talk relating to the extension of the steel trade in the North of England, but nothing definite has yet been done. The railway chair trade is much more active. There has as yet been no improvement in the finished iron trade. Plates are quiet, and the Tyne strike has disadvantageously affected the plate makers. Prices are about 5*l.* 5s.; bars and angles, 5*l.*, less the commission. The tendency has been below rather than beyond these rates. Coal and coke comparatively quiet. Connal's stores had to-day 81,200 tons of iron, 2200 tons in excess of last Tuesday.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

March 6.—A meeting of the Blaenavon colliers held since last report has rather astonished us with regard to their opinion of their *quasi* leaders. Mr. Thomas Halliday may well say now "save me from my friends." Can it be that the men are at last awakening to the knowledge that by blindly following the leader they have to a great extent ruined the trade of the district, or do they hate Mr. Halliday because even he sees that this is not the time to fight against reasonable wages reductions? At any rate they did not speak very respectfully of him. The Chairman at this meeting called Mr. Halliday a "professed Trades Unionist," and another collier said it was time that he should return to work in the mine, and live by the wages he will get. This caused loud applause. He did not think they required a delegate from England to represent them on the conciliation board, and it was full time that Mr. Halliday should be removed from it. A resolution was ultimately passed against allowing any modification of the sliding scale, and also that a conference be held "to try to bring about a limitation of the output and other measures for the benefit of masters and men." Several strikes are now pending in the district; first of all there is that of the Panty men, or rather a section of them, employed at the steelworks. A deputation of the men have met the masters, but as yet no satisfactory settlement has been arrived at. The tin and iron workers at the Pentrych and Melingriffith Works, belonging to Messrs. Booker and Co., have also struck, owing to an attempted reduction of 10 per cent. The colliers are also affected, and the total number of persons interested in the strike is estimated at about 1500. No doubt unless the reduction is submitted to the works will be closed.

A meeting of the newly constituted Great Western Colliery Company has been held this week. It was resolved to authorise the directors to borrow the sum of 20,000*l.*, but the board stated through the Chairman (Mr. S. Lang) that probably nothing like that amount would be required.

At last two bodies have been recovered from the Dinas pit. The inquest has been formally opened, and adjourned until the beginning of next month.

At the Aberdare Police Court John Whiteley, working at the Fforchneol Colliery, has been fined 2*l.* and costs for using gunpowder after permission to do so was withdrawn. One of the men injured in this pit has died. His thigh was broken by his being blown a long distance.

The Alexandra (Newport) Dock Company have met at their London office. It was stated by the Chairman (Sir George Elliot) that considerable progress had been made during the past year with the docks, and the business of the company was increasing satisfactorily. The company was in a position to pay their debenture and preference interest, and it is hoped that if things go on as at present the directors will be able to offer something to the ordinary shareholders: 3000*l.* was ordered to be set apart to be carried to the reserve fund.

The iron industry has been somewhat dull during the week, yet on glancing at the various establishments in the district there is apparently a little more work in hand. There is no change, however, to note in prices, and especially for steel rails these are exceedingly low. It would be surprising to hear that many of the latter orders are executed at a profit. Railway iron is in very moderate request. There have been one or two rather large clearances of iron to New Zealand. Bars are rather dull.

The Tin-Plate Trade continues to present a more satisfactory appearance. During the last few weeks prices have altered for the better, and the demand has improved. A re-start has been made at the Rhinderin Works. The Waterloo Tin-Plate Works, which were only started a year or so ago, were sold on Monday to Mr. W. Lewis, the secretary of the late company, for 8100*l.*—a small amount considering the size of the works, and the excellence of the machinery, &c. They belong to a limited company, which the depression in trade caused to liquidate, and were situated near Machen. It is generally believed they have been purchased on behalf of a syndicate, who intend carrying them on. The Pontymister Tin-Plate Works have been purchased by Major P. S. Phillips, Crumlin Hall, and the principal departments will be immediately started. It is expected that the remainder will be in work in the course of a few weeks. After a stoppage of two years the inhabitants are naturally overjoyed at the resumption of work.

As for the coal industry, little fresh can be said. It is evident, as already stated, that wages must be reduced if this district is successfully to compete with others. The demand on foreign account for steam coal is kept up quite to the average. Coal is still very abundant and cheap, not the least change having taken place in quotations. The house coal trade is not quite so active, owing to the advent of warmer weather. Patent is rather dull. Messrs. Harris have won the Four-Feet seam of coal at Navigation, and it has proved of excellent quality. It was met with 700 yards below the surface.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

March 6.—The change in the weather has been more favourable for mining operations in the lead districts, and at several places a fair quantity of ore is being raised, but certainly not what might be expected in such an old and extensive area as that occupied by lead mines in Derbyshire. Like most others, there is a lack of capital for speculating in it, whilst it lacks the class of men who have so well worked up many of the old mines in North Wales. The companies that have opened out in several places it may be said have not been at all successful, whilst private enterprises has been far more fortunate. More to the north several ironstone mines that at one time were extensively worked are now doing but little, as it is found as cheap, if not cheaper, to bring the ore from a distance, so that the shires of Northampton and Lincoln are now well patronised by our ironmasters. But the iron trade itself is anything but brisk, for considerable stocks are held in several directions, whilst prices are such that no margin of profit is left to the sellers, although Derbyshire pig is superior to the Cleveland and others for both mill and foundry purposes. At the foundries business goes along steadily at most of them, but the number of hands employed is considerably less than formerly. The collieries have had a very fair time of it since the commencement of the New Year, owing to the marked severity of the weather. This of course applies to house coal, the demand for which is now becoming quieter. The London trade has been especially good, and large quantities of Silkstone and other coal has been forwarded from Clay Cross, Eckington, Blackwall, Tibshelf, Grassmore, and several other places. But a drop of 1s. 6d. per ton on the Exchange on Friday shows clearly how the trade is moving. We have evidently had a much better time than we are likely to have for the next six months at least, whilst prices low as they now are in all probability will come down still lower. Steam coal does not sell at all well, seeing that very little is now being shipped, so that what is used is principally for the furnaces and locomotives. Some few collieries have been doing a trade with the West of England as far as Bath and Bristol, and with the intermediate stations from Birmingham, whilst a tolerably fair tonnage has been put on to the Great Eastern. In ordinary engine coal there has not been any improvement of late, so that there is some difficulty in effecting sales, whilst the same is also the case with respect to small coal, although offered at a very low price indeed. Coke is in moderate request, but the requirements of the Sheffield manufacturers have not materially increased of late.

In Sheffield trade is certainly no worse than it has been, but there are still many workmen entirely unemployed, whilst the relief fund may be said to be exhausted. A ladies' committee, however, is doing good work in providing clothing for the most destitute of the young and old. Manufacturers still complain of the large quantity of goods that are being imported from Germany and America, the former sending a large quantity of pocket knives, well finished, at a very low price as compared with our own. The material is inferior to our own, but the appearance is taking. Some few of the cutlery houses are fairly off for work, especially in the finer descriptions of table knives, for the home and other markets. A considerable quantity of secondary pen, pocket, and other knives are now being made from Bessemer steel of a special quality, but made at a much less cost than from crucible steel. Bessemer rail makers have been fully employed, but just now they are in no way pushed, and are open to contracts for delivery at a comparatively short notice. At no time since steel rails were first manufactured have prices been so low as they are now, owing to the competition resulting from the many new firms that have commenced business when they found that iron rails were fast going down, and likely to become things of the past. At the mills there has been a fair output of ship and boiler plates, whilst there has also been a rather better inquiry for hoops. In foundry material there has not been much improvement, but it is expected that a demand will shortly arise for builders' castings and other light work. The collieries throughout the greater part of South Yorkshire have been fairly employed of late, the demand for house coal having been good, but a decline is now being experienced, owing to the change in the weather. The London trade has kept up very well indeed, and a large tonnage has been sent from the Mitchells' Main and other collieries, which have a reputation in the Metropolitan market. Steam coal is still very quiet, and the shipments from Grimsby very moderate. For other descriptions of coal, such as slack and smudge, there is only a poor inquiry.

The Stephenson Memorial Hall at Chesterfield is now fast progressing towards completion, and it is expected will be ready for opening in June. It will be the home of the Derbyshire Engineers' Association.

The award with respect to the proposed 12½ per cent. reduction in miners' wages has not yet been made. The arbitrators appointed on behalf of the men spent several days in Barnsley last week collecting evidence. It is expected that the award of the umpire will be given in about three weeks from the present time.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

March 6.—Even if I had no interest in Cardiganshire mines, which I have, I should be very sorry to traduce them, as "Miner" accuses me of doing. I have said, and I repeat the statement, that many mines in Cardigan will pay for legitimate mining. But I protest, and I hope to continue to protest, against the "mine gambling" which is so common in the neighbourhood whence "Miner" hails, and which leads one to the conclusion that more mines are started for the sake of financing than for ordinary mining. Referring to my remarks last week about partnerships of intelligent miners working mines, I would add that the bulk of successful mines in Western North America are worked in this way. Take the following, just to hand, concerning the mines of Silver Reef, Utah:—"These mines have been developed and worked by poor men, who with muscle and energy have brought about the results which now make Silver Reef the most productive and valuable camp in Utah." Capital is essential to great undertakings, but it is a waste of powder to load a cannon in order to shoot out the eye of a fly. Meanwhile I am hoping that something good may come of the many explorations that are now going on in Cardiganshire. We are looking for tangible results from Mr. Pell with Blaen Caelan, from Mr. Green and Court Grange, and from the wide range of mines under the care of Mr. Kitto. Mr. Francis, too, promises us good results from Cefn Brwyno and the South Cambrian. In Shropshire the lead mines are working as usual, and with higher prices some of the non paying mines might yield a small dividend. The resuscitation of old mines and the projection of new ones is very active just now in Flintshire, but I fear there will be more projectors than investors in the present state of the metal market.

There is a little trade doing at the collieries, but prices are unremunerative, and stocks do not lessen at the best collieries. Some of the colliers have during this winter been barely earning 5s. a week. Shipping orders are scarce, and can only be booked at a loss. The Cambrian Railway Company have just held their half-yearly meeting, when the report showed great saving effected in the management of the railway during the last half-year. Mr. David Davies, M.P., who has had large experience in railway construction, protested that the money had been saved at the expense of the safety of the railway, and that much of the money to be paid in dividends should have been applied to the repairs of the line and of the rolling stock. He resigned his seat as a director. The first sod of the Ruthin and Cerrig-y-drindion Railway has been cut. I wish I could have written the Corwen and Cerrig-y-drindion Railway, for we want a railway along the line of the Great Holyhead-road from Corwen to Bettws-y-Coed.

I observe in last week's Journal the announcement of "the discovery of a new vein of slate-rock on the western side of Snowdon," where, it is said, "it has been maintained by geologists and mining engineers of considerable note that no vein or veins of slate-rock of any substance or quality would ever be found in that portion of the slate-producing district of North Wales." I should like to be informed of the names of the geologists and engineers who have said this. Besides, upon turning to the map of slate ranges, in Mr. Davies's book on Slate Quarries, I find his slate range No. 3 running along the west side of Snowdon. He also makes the remark concerning this range of slate-rock—"It will, probably, receive more attention than it has hitherto received." Still, the quality of the rock has to be proved, and when we can sell all the slates we can split during the day it will be time to talk of employing the electric light to help us to split the remainder. It is pleasant to note an improvement in the Slate Trade. Prices are still remunerative to both men and masters, and the reduction in the selling price ought to facilitate sales and ward off competition. The new bridge over the River Mawddach, at Penmaenpool, has just been opened. All its capital was subscribed, and, as I pointed out in a former report, the bridge will be of great advantage to the inhabitants on the north side of the river. Another chemical works on the estuary of the Dee has been closed. The trade seems to be in process of transference to Widness and to the banks of the Tyne.

REPORT FROM THE FOREST OF DEAN.

March 6.—Circumstances have led to some changes since our last report. An attempt had been made by the Forest coal proprietors to keep up prices, irrespective of quotations in the neighbouring coal fields of South Wales and Somerset, including what is termed the Bristol coal field, but they soon discovered that arbitrary decisions and regulations are of little consequence against the force of natural circumstances. Yielding to the depression of the times, the South Wales coal proprietors reduced the price of coal, and in that way secured an impetus to their business, whilst the Forest masters held out against the times to find themselves being left behind in the race of commerce. Numerous vessels came to Lydney for Forest coal, but finding that prices were kept up, and stood considerably above the quotations in South Wales, they left without cargoes and went to Newport or Cardiff to obtain their supplies. The difference in prices would make a difference of prices of cargoes, according to the tonnage of vessels of from 30*l.* to 50*l.*, an important consideration to men of business in these times of competition. The Welsh seams, as a rule, are said to be thicker than those in the Forest, and, therefore, cutting and bringing it to bank is less expense than is the case here, which enables the Welsh masters to sell at lower figures. This is trying to the Forest proprietors, but at the same time they have to face it, and must do it in some less objectionable way to that of attempting to carry quotations against other markets. Of late years the Forest masters and managers have immensely improved in the point of carefulness in the matter of fuel on the tips and pit banks. We can remember the time when tons of coal were recklessly burnt in waste in a single night on tips and pit banks, which, of course, reduced the incomes of masters and men, but especially that of the masters, as the masters lost the full value of the coal after the cost of cutting, and the men the value of their work; as at the time referred to the practice was indulged in continuously.

Now, however, very little is wasted in that way; possibly the banksmen have hardly sufficient for light and warmth in some cases. The value of the coal saved, however, must be considerable in amount, and we have no doubt but that that improvement and benefit must be credited in a large measure to the strictures and friendly suggestions or hints which have appeared in the Press from time to time. No doubt other improvements might be effected in the way of economy in management, without inflicting injury on workmen, or any person connected with the works. If a penny saved is a penny gained, it follows that wise and economical management of collieries is an important element in conducting large works. But recurring again to the competition of the neighbouring coal fields, and that Welsh quotations seriously affected the Forest coal trade, it was to be expected that the circumstances alluded to would influence our colliery proprietors, and on Saturday last they held a meeting at Gloucester, when the matter of prices, amongst other things, was discussed, and resulted in a decision to lower their prices at least 6d. per ton, and also put up notices at the various pits for a 5 per cent. reduction of wages, which has accordingly been done. Quotations are now given out as follows:—Nuts, 7s. 9d.; rubble, 9s. 3d.; Forest, 10s.; and best block, 10s. 9d.; but it is hardly likely hard and fast lines will be absolutely adhered to in all cases. The hardware trades are not flourishing to any encouraging extent, the local iron trade remaining very dull. An intimation has been given that Parkend Works are rather likely to be started afresh, but nothing definite has transpired on the subject.

The sewage difficulty is still without a definite settlement. Mr. Constance, although he did not obtain an interim injunction, has secured an engagement from the sanitory authority not to allow any water from the tanks to pass into Sewdley stream except what has been purified; but little faith is locally felt in the engagement being kept. The education question, too, is being stirred up mainly in connection with the increased expenses which are coming on the people in the way of rates. The working of the education scheme will, we believe, be gradually improved, but grave doubts still hang over the sewage question. The Ratepayers' Protection Committee, believing that there are radical faults in the sewage system, and that gross blunders have been committed by the authority in the matter, have resolved to resist payment of the sewage rate, and test the legality of the authority's proceedings by carrying a case to the Queen's Bench if necessary, and are collecting funds for the purpose. They have engaged an eminent solicitor for the defence. However, it is too soon to express any definite opinion on the proceedings likely to be instituted, as no case has yet been before the magistrates for the purpose. We may in conclusion state, however, that witnesses and evidence have been secured against action is actually begun. We defer further remarks for the present.

FOREIGN MINING AND METALLURGY.

The Administration of the Belgian State Railways is about to let contracts for the *materiel* required for the establishment of iron permanent way on a further section of the Belgian State Railways. In an adjudication for five lots of steel axles the Hoerde Company, of Dortmund, offered to supply the lot at 5*l.* 6s. 6d. per ton. The John Cockerill Company, of Seraing, Belgium, although content with modest profits, tendered at 5*l.* 10s. per ton, or 3s. 6d. in excess of the German tender. MM. Nicaise and Delcewe have delivered the lowest tender for switches required for the Belgian State Railways; the rate of this tender was 10*l.* 16s. per ton. A union or amalgamation appears to be in contemplation between the Dyle Workshops Company and the company owning the Bacalan Workshops, near Bordeaux. M. Jean Robert, of Liége, has purchased the Belgian patents relating to the Hoch motors. M. Bourson, an engineer associated with the Franco-Belgian Somorrostro Mines Company, has just published a brochure on the Somorrostro Mines.

Belgian colliery proprietors appear to have to contend against a good many difficulties. Recently the navigations were interrupted by frosts; now it is floods, which have occasioned delay and difficulties. Deliveries, in consequence of the advance of the season, are still, however, relatively small. The winter has come to a close, but still there has been no revival or advance in prices in the Belgian coal trade; there has been a heavy consumption of household coal, but the enquiry for industrial coal is still languid, and there appears at present to be no break in the clouds which overhang the Belgian industrial horizon.

There has been rather a better sustained current of business in the Haute-Marne. If there have been few heavy transactions, on the other hand small orders for reassortments have been rather more numerous, and have come to hand from all quarters of the French provinces. Parisian orders leave something to be desired. In the Nord there has been a passable number of orders; prices have, however, remained at a low level. There appears to be a reluctance to advance rates, lest the demand should be checked in consequence. In the Loire-et-Rhone there is still considerable stagnation in the iron trade. A German Tariff Commission has fixed the tariff on iron rails entering Germany at 6d. per cwt. The duty on iron bars has been fixed at 9d. per cwt. The directors of the collieries of the French departments of the Nord and the Pas-de-Calais are about to meet at Lille or Douai to consider tariff and treaty of commerce questions. It appears that the basin of the Pas-de-Calais produced 395 000 tons more coal last year than in 1877. The production of the basin of the Nord declined, however, 135,700 tons last year, as compared with 1877. The general progress of the production of the two basins was thus reduced last year 259,300 tons.

CONSEQUENCES OF THE DEPRECIATION OF SILVER.—The tendency of the depreciation of silver to close those silver mines where the cost of extraction is greatest is illustrated in the recent failure of the Bohemian Mining and Smelting Company. A correspondent, writing from Prague, says that the company has been unable to dispose of its products (silver and lead) at even a moderate profit. To some extent no doubt the fall in the price of the less valuable metal has hastened on the suspension. It would be interesting to know how far the aggregate production of silver throughout the world has fallen off by the closing of unprofitable mines in consequence of the

fall in its value. It is chiefly in Germany and in Mexico that cases of this kind must be sought for.

DISCLAIMER.

MESSRS. HARRISON, AINSLIE, AND CO., of ULVERSTON, and of 3, EAST INDIA AVENUE, LONDON, E.C., in reply to several applications they have received in consequence of their name having been associated with an alleged discovery of the late Mr. PERRY DOWNING, for the CONVERSION OF CLEVELAND IRON INTO STEEL, beg to state that they are in NO WAY INTERESTED, either directly or indirectly, in the PATENT taken out to deal with the above, nor in any company or association that may be formed or be in course of formation for its development.

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STEAM-POWER ON TRAMWAYS.

LIGHT TRAMWAYS FOR RURAL DISTRICTS.

The Select Committee of the House of Lords on Tramways held their first sitting on Monday, to consider as to the use of steam as applied to tramways generally, and especially as applied to tramways on country roads. The Marquis of RIPON presided.—Mr. Allport, Manager of the Midland Railway, was examined with reference to the desirableness of having tramways in country districts, where the traffic could not warrant the construction of a regularly equipped railway. His evidence was to the effect that there are many cases where light tramways on the narrow gauge plan of 2 ft. or 2 ft. 6 in. might be constructed with propriety along highways in country districts in connection with railway stations. In such cases the tramways would be beneficial to railways, but in towns he considered that tramways ought to be put on the footing of railways in the matter of taxation, and he altogether objected to the use of steam in towns on tramways.—Mr. Oakley, of the Great Northern Railway, gave evidence similar in purport.—Mr. Myles Fenton, Manager of the Metropolitan District Railway, stated that the time had now arrived when the vestries and other public bodies should not further be worried by these incessant attempts to extend tramways into the crowded thoroughfares of the Metropolis.—Mr. Small, Managing Director to the London Tramway Company, stated that steam cannot be used any more cheaply on a tramway line than horses, but the talk about the horses being frightened when steam-cars were used was characterised by a good deal of humbug. There had been a great many trials in America during the last 15 or 20 years, and, economically, steam on tramways was considered a failure up to the present time. In Glasgow the line on the Vale of Clyde route between that city and Govan is over a distance of a mile and a-half on a very level road, sparsely populated along the route, but with a large population at either end. The steam cars are there run at a cost of 5d. or 5½d. per mile. Whether the contractors made money out of it or not he could not say; but if they pay expenses the steam service is cheaper than with horses, because horses could not be found to do the same work for the same money. The precaution would have to be taken with country horses of breaking them in before bringing them into the towns.—Mr. Carpe, Manager of the Cassel Tramway Company, Germany, gave the results of his experience of the use of steam in connection with a tramway extending for three and a-half miles, partly through the town, and partly in the country. The steam engines are manufactured by Messrs. Merryweather, of London. They do not emit smoke or steam, and they make exceedingly little noise. If a driver keeps his horses in hand there is no danger. There have been accidents with horses in two or three instances; but in each case the fault has lain with the driver, and not with the tramway company, he in each case having been drunk. The cars travel in the town at the rate of eight miles per hour, and the engine can be brought to a dead stop in its own length, about 4 yards, when travelling at this rate of speed. Outside the town the speed is increased to nine or ten miles per hour.—The committee adjourned.

ST. GOTHARD TUNNEL.—The small bronze turbines, which make 155 million turns per annum, after four or five years' service require but slight repairs. Turbines of iron and steel under the same pressure do not last over a year. The 16 air-compressors supply air enough under a pressure of eight atmospheres to supply 18 to 20 drills, and to ventilate thoroughly all the tunnel, of which about eight miles has already been bored. On each side there are night and day many hundreds of workmen, as many lamps, and about 600 lbs. of dynamite are used daily. The financial difficulties of the company are connected with other portions of the line. The works of the tunnel have not been interrupted a single day for six years, and the original estimates will probably not be exceeded, although many unforeseen obstacles have been encountered. The tunnel will probably be finished within eight years from its commencement. The stipulated time was nine years.—*Comptes Rendus*.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the NEW PERRAN MINERALS COMPANY (LIMITED).—Notice is hereby given, that ALL CREDITORS of the above-named company are required, on or before the 15th day of March next, to SEND IN their NAMES and ADDRESSES, and the AMOUNTS and PARTICULARS of their SEVERAL CLAIMS, to JOHN HENRY HAMLEY, the Official Liquidator of the said company, at the Stannaries Court Office, in Truro, within the said Stannaries.
FREDERICK MARSHALL, Registrar.
Dated Registrar's Office, Truro, February 28, 1879.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the NEW PERRAN MINERALS COMPANY (LIMITED).—The Vice-Warden has, by an Order made in the above Matter, bearing date this day, APPOINTED JOHN HENRY HAMLEY, of Truro, within the said Stannaries, an Officer of the said Court, to be absolutely the OFFICIAL LIQUIDATOR of the above-named company. FREDERICK MARSHALL, Registrar.
Dated Registrar's Office, Truro, February 28, 1879.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL UNITY WOOD MINING COMPANY.—Notice is hereby given, that ALL CREDITORS of the above-named company are required, on or before the 15th day of March inst., to SEND IN their NAMES and ADDRESSES, and the AMOUNTS and PARTICULARS of their SEVERAL CLAIMS, to CHARLES WILLIAM CLINTON, the Official Liquidator of the said company, at the Stannaries Court Office, in Truro, within the said Stannaries.
FREDERICK MARSHALL, Registrar.
Dated Registrar's Office, Truro, March 1, 1879.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL UNITY WOOD MINING COMPANY.—The Vice-Warden has, by an Order made in the above Matter, bearing date this day, APPOINTED CHARLES WILLIAM CLINTON, of Truro, within the said Stannaries, an Officer of the said Court, to be absolutely the OFFICIAL LIQUIDATOR OF THE ABOVE-NAMED COMPANY.
FREDERICK MARSHALL, Registrar.
Dated Registrar's Office, March 1, 1879.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Conrwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the CALVADNACK MINING COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the above-named company by the Court was, on the 5th day of March instant, presented to the Vice-Warden of the Stannaries by William Harvey, Henry Whitford, William West, William John Rawlings, William Husband, Francis Harvey, and Nicholas James West, carrying on business at Camborne, within the said Stannaries, as General Merchants, under the style or firm of "The Camborne Trading Company," shareholders, and claiming to be also creditors of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the Prince's Hall, in Truro, in the county of Cornwall, on Wednesday, the 2nd day of April next, at Eleven o'clock in the forenoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners, or their solicitors, of his intention to do so, such notice to be forthwith forwarded to P. P. SMITH, Esq., Secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same from the petitioners, or their solicitors, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 31st day of March inst., and notice thereof must at the same time be given to the petitioners, or their solicitors. HODGE, HOCKIN, AND MARRACK, Truro, Cornwall
(Solicitors for the Petitioners).
Dated Truro, 6th day of March, 1879.

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PRELIMINARY ANNOUNCEMENT.

MR. ARTHUR T. CROW (Contractors' Auctioneer) has been honoured with instructions from H. LOVATT, Esq., Contractor, owing to partial completion of contract, TO SELL, BY AUCTION, at the Contractor's Yard, Cheltenham, on the 26th, 27th, and 28th days of March, 1879, the EXTENSIVE AND VALUABLE COLLECTION OF

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Particulars, and any other information required, can be had by applying to Mr. JAMES HORE, Knockmahon Mines, County Waterford; or to the Secretary, Mr. WILLIAM HAROLD, at the company's office, 30, Lower Ormond Quay, Dublin.

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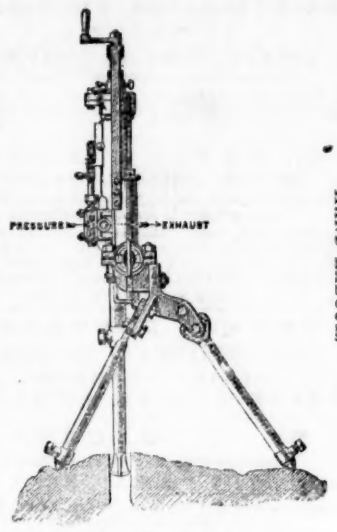

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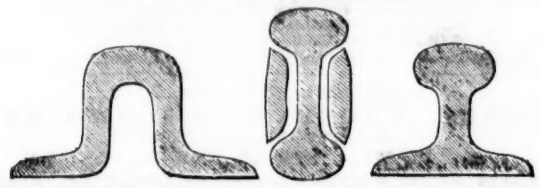

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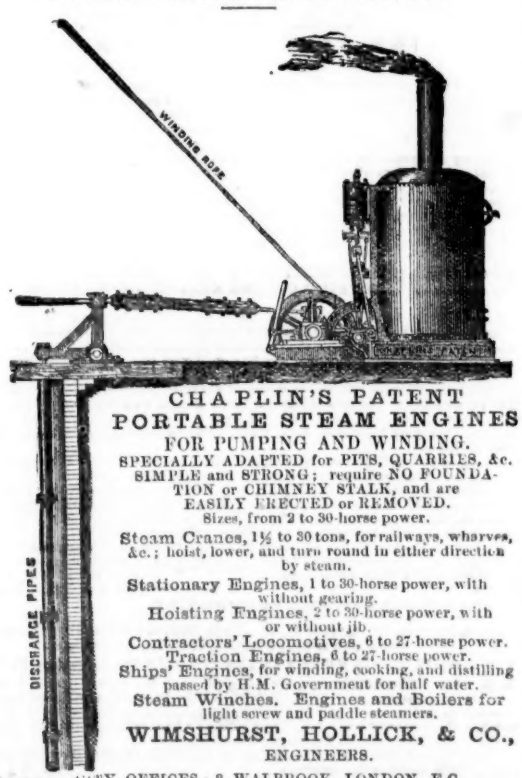

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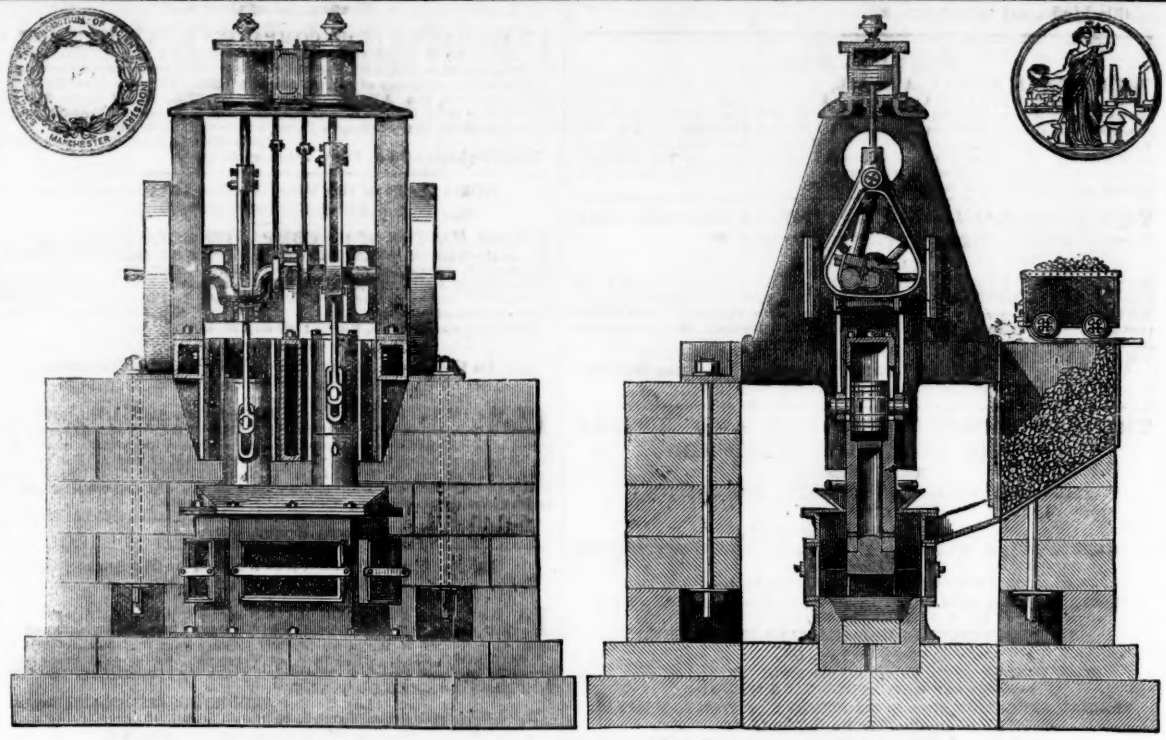

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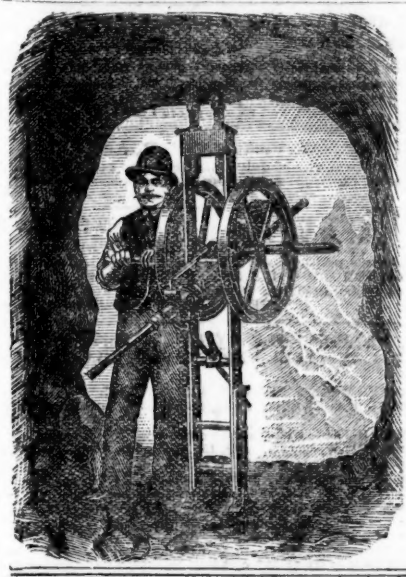

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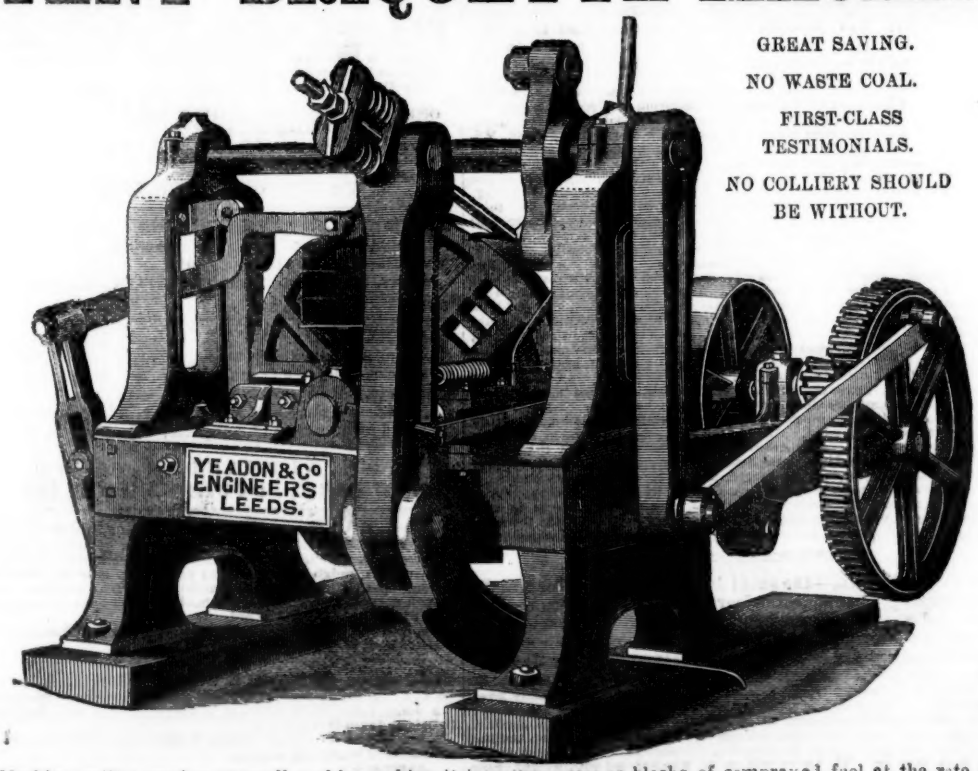

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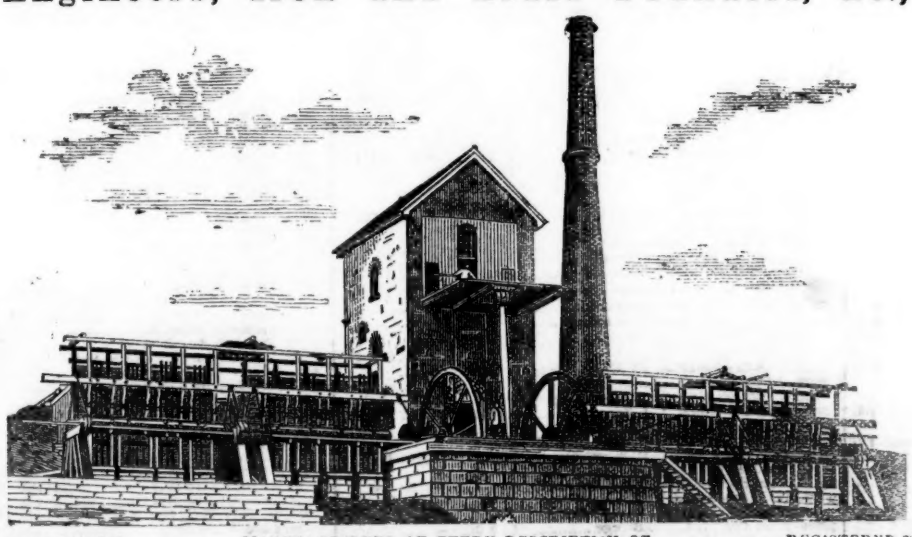

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1000	Carn Brea, c, t, Illogan†§	58 7 6	32	30 31	208 0 0	1 0 0	Feb. 1874
400	Cashwell, l, Cumberland*	2 10 0	—		1 9 6	0 2 0	Aug. 1876
2450	Cook's Kitchen, t, Illogan†§	25 14 9	1½	1 1½	11 17 0	0 7 6	Jan. 1873
240	Devon Gt. Consols, c, Tavistock†*	1 0 0	1⅝	1⅜ 1⅝	118 15 0	0 5 0	July 1877
4296	Dolcoath, c, t, Camborne	10 14 10	28½	26 28	113 1 3	0 5 0	Nov. 1878
5000	East Black Craig,* l., Scotland	5 0 0	—		0 10 0	0 10 0	Feb. 1877
300	East Darren, l, Cardiganshire	32 0 0	—		235 10 0	1 0 0	Aug. 1876
6400	East Pool, t, c, Illogan	0 9 9	9¼	9½ 10	15 16 3	0 3 0	Jan. 1879
40000	Glasgow Cara., c* [30,000 £1 p., 10,000 15s. p.]		1	¾ 1	0 13 10	0 0 6	Aug 1878
7500	Gorsedd and Merllyn Cons., l, Flint	2 10 0	2½	2¼ 2¾	0 5 0	0 5 0	Aug. 1877
5000	Great Laxey, l, Isle of Man*	4 0 0	15	15 16	24 10 0	0 5 0	Jan. 1879
615	Gt. Retallack, l, bl, Perranzabuloe	5 18 6	—		0 1 6	0 1 6	May 1876
6400	Green Hurth, l, Durham*	0 6 0	4½	3¼ 4	2 2 0	0 3 0	Mar 1878
6000	Grogwinion, l, Cardigan*	2 0 0	2	1½ 2	0 14 10	0 0 10	Aug. 1878
9830	Gunnislake (Clitters'), t, c	5 5 0	1¾	1¼ 1¾	0 13 9	0 1 0	Oct. 1876
60000	Holmbush, a, c, s-l, Callington*	1 0 0	—		0 4 6	0 0 6	Sept. 1876
2500	Isle of Man, l, Isle of Man*†	25 0 0	—		82 5 0	0 0 0	Feb. 1879
30000	Leadhills,* l, Lanarkshire	6 0 0	1½	1½ 2	0 15 0	0 3 0	Mar. 1878
400	Lisburne, l, Cardiganshire	18 15 0	35	30 35	587 10 0	1 0 0	Aug. 1878
14000	Llanidloes,* l, Montgomery	3 0 0	—		0 9 0	0 4 6	Nov. 1876
9000	Marke Valley, c, Linkinhorne	5 3 6	½	⅜ ½	7 15 0	0 2 0	Jan. 1876
10000	Mellanear Copper, Hayle*	2 0 0	4½	4 4½	0 8 0	0 3 0	Feb. 1879
9000	Minera Mining Co., l, Wrexham*	5 0 0	9½	9 11	67 17 8	0 2 0	Nov. 1878
20000	Mining Co. of Ireland, c, s, l*	7 0 0	—		23 17 6	0 2 6	Jan. 1878
1024	North Busy, c, Chacewater	1 14	—		1 0 0	0 5 0	Oct. 1878
1289	North Hendre, l, Wales	2 10 0	—		2 12 6	0 5 0	Dec. 1878
300000	Panty Mwyn,* l, Mold (8794 iss.)	2 0 0	—		0 3 0	0 2 0	Aug 1878
6000	Pedn-an-drea Con., t, Redruth	0 8 6	—		0 9 0	0 9 0	June 1877
5000	Penhalls, t, St. Agnes	3 17 6	1¾	1¼ 1¾	3 13 6	0 2 0	July 1875
6000	Pennant, l, bar, North Wales*	5 0 0	5	4½ 5	0 10 0	0 5 0	Mar. 1878
45793	Penstruthal,* t, c, Gwennap	2 0 0	3s.	1s. 3s.	0 2 8	0 0 8	Nov. 1875
18000	Prince Patrick,* s-l, Holywell	1 0 0	1¼	1 1½	0 14 0	0 1 3	Jan. 1876
10000	Red Rock,* l, Cardigan	2 0 0	2	1¾ 2¼	0 4 0	0 2 0	Jan. 1878
12000	Roman Gravels, l, Salop*	7 10 0	6½	6 6½	7 15 0	0 5 0	Mar. 1878
512	South Caradon, c, St. Cleer	1 5 0	55	50 55	744 10 0	1 0 0	Nov. 1878
6123	South Condurrow, t, c, Camborne‡	6 5 6	11	10½ 11	4 17 0	0 16 0	Jan. 1879
12000	St. Harmon,* l, Montgom.	3 0 0	3	2 3	0 12 0	0 3 0	July 1878
10000	So. Pr. Patrick,* s-l. (8000 sh. issued)	1 0 0	—		0 7 0	0 1 0	Oct. 1875
4500	South Wh. Frances, t, Illogan†	7 12 4	8¾	9 9½	37 12 0	0 7 0	Jan. 1879
14000	Tankerville, l, Salop*	6 0 0	2⅛	2 2½	4 17 0	0 5 0	Dec. 1876
6000	Tincroft, c, t, Pool, Illogan†§	11 10 0	10	9½ 10	50 8 6	0 5 0	May 1877
15000	Van, l, Llanidloes*	4 5 0	15	18 19	23 10 6	0 5 0	Jan. 1879
3000	W. Chiverton, l, Perranzabuloe §	15 15 0	1	½ 1	55 10 0	0 10 0	Feb. 1878
1763	West Poldice, St. Day §	11 0 0	—		1 19 0	0 4 0	July 1876
512	West Tolgus, c, Redruth	95 10 0	32	30 32	32 0 0	1 0 0	Nov. 1873
2048	West Wheal Frances, t, Illogan §	29 1 3	3½	3 3½	3 12 6	0 5 0	Oct. 1872
600	West Wh. Seton, c, Camborne†§	49 0 0	7	5 7	446 0 0	0 15 0	Apr. 1878
12000	West WyeValley,* l, Montgom.	3 0 0	2¼	1½ 2	0 12 0	0 3 0	Nov. 1877
1024	Wh. Eliza Consols t, St. Austell	18 0 0	—		19 10 0	1 10 0	Aug. 1878
2048	Wheal Jane, t, Kea §	5 13 10	1½	1 1½	8 5 0	0 5 0	July 1875
4295	Wheal Kitty, t, St. Agnes	5 4 6	1¼	1 1¼	11 19 6	0 2 6	Dec. 1874
25000	Wh. Newton, a, c, s, t, Calstock*	1 0 0	—		0 8 6	0 4 0	Sept. 1877
80	Wheal Owles, t, St. Just‡	173 15 0	—		522 10 0	4 0 0	Aug. 1872
3000	Wheal Peevor, t, Redruth	7 11 0	10	10 10½	0 15 0	0 5 0	Nov. 1878
6000	Wheal Prussia, t, Redruth	0 5 0	—		0 4 0	0 1 0	July 1877
10000	Wye Valley, l, Montgomery*	3 0 0	2	½ ¾	0 10 6	0 4 6	Oct. 1876

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
35500	Alamillos, l, Spain*†	2 0 0	1½	1¼ 1¾	1 19 9	0 0 6	Oct. 1878
30000	Almada and Tirito Consol., s*†	1 0 0	3s.	⅛ ¼	0 6 3	0 1 0	May 1876
20000	Australian, c, South Australia†	7 7 6	1¾	1¼ 1¾	1 1 6	0 2 0	July 1878
10000	Battle Mountain,* c, (6240 part pd.)	5 0 0	—		0 10 0	0 10 0	Nov. 1872
15000	Birdseye Creek, g, California*	4 0 0	½	¾ ½	0 14 0	0 2 6	June 1874
20000	Cape Copper Mining,*† So. Africa	7 0 0	26	26 28	33 2 6	0 17 6	Dec. 1878
34433	Cedar Creek, g, California*	5 0 0	⅜	⅛ ⅜	0 5 0	0 2 6	June 1873
35000	Cesena Sul. Co., Romanga, Italy*	10 0 0	—		0 18 0	0 2 0	Aug. 1878
15000	Chicago, s, Utah*	10 0 0	1	½ ¾	2 8 0	0 4 0	Nov. 1876
65000	Colorado United, s-l, Colorado*†	5 0 0	1⅞	1⅝ 1⅞	0 13 6	0 4 0	Jan. 1875
10000	Copiapo, c, Chili* (£20 shares)	16 15 0	—		7 11 5	0 3 0	May 1877
100000	Don Pedro North del Rey*†	0 18 0	1½	⅞ 1⅛	2 5 9	0 2 0	Mar. 1872
23500	Eberhardt & Aurora, s, Nevada*†	10 0 0	3¾	3¼ 3¾	1 8 0	0 3 0	Dec. 1877
70000	English & Australian, c† S. Aust.	2 10 0	1⅛	⅞ 1⅛	2 16 9	0 1 0	Mar. 1878
30600	Flagstaff, s, Utah*	10 0 0	½	⅛ ¾	4 2 0	0 5 0	July 1873
25000	Fortuna, l, Spain*†	2 0 0	4	4 4½	7 3 2	0 3 4	Oct. 1878
55000	Frontino & Bolivia, g, New Gran.*†	2 0 0	2½	2 2¼	0 2 6	0 1 6	Sept. 1878
30000	Gold Run, hyd.	1 0 0	—		0 2 4	0 0 4	Oct. 1872
100000	Hercules and Roe, s, Colo., fy. pd.	2 0 0	—		2 8 0	2 8 0	Jan. 1876
68000	Kapunda Mining Co. Australia†	1 3 0	—		0 2 4	0 0 6	June 1873
20000	Last Chance, s,* Utah	5 0 0	½	⅜ ⅝	0 14 0	0 2 0	July 1873
15000	Linares, l, Spain*†	3 0 0	4	4 4½	17 10 4	0 2 6	Oct. 1878
85000	London and California, g*†	2 0 0	½	⅜ ⅝	0 1 0	0 1 0	July 1875
7837	Lusitanian, Portugal*† (£5 sh.)	3 10 0	—		1 11 6	0 1 6	Mar. 1873
5000	Mamm. Copperopolis of Utah, c, s	10 0 0	—		0 5 0	0 5 0	Dec. 1872
5000	Mountain Chief, s, Utah*	10 0 0	—		0 4 0	0 4 0	Jan. 1873
10000	Pontgibaud, s-l, France†	20 0 0	23	22 24	26 19 8	0 19 9	Dec. 1878
100000	Port Phillip, g, Clunes*† (£2 sh.)	1 0 0	⅝	½ ⅝	1 12 0	0 1 0	Mar. 1879
54000	Richmond Consols, s, Nevada*†	5 0 0	9¼	9 9¼	7 1 6	0 10 0	Feb. 1879
40000	Santa Barbara,* g, Brazil	0 10 0	2½	1⅞ 2⅛	0 5 9	0 1 0	Nov. 1878
120000	Scottish Australian Mining Co.*†	1 0 0	1⅞	1⅝ 1⅞	15 per cent.		Nov. 1878
80000	Scottish Austral. Mining Co., New	0 10 0	⅞	¾ ⅞	15 per cent.		Nov. 1878
122500	Sierra Buttes, g, California*†	2 0 0	2	2 2¼	1 19 0	0 1 0	Oct. 1878
140625	S. B. Plumas Eureka	2 0 0	3	2⅞ 3⅛	2 1 0	0 3 0	Oct. 1878
60000	South Aurora, s, Nevada*	5 0 0	¼	⅛ ¼	0 14 2	0 2 0	Nov. 1873
£253000	St. John del Rey*† (£5 stock & multiples dealt in)			265 275	½ year. 15 p. ct. for Dec.		1878
20008	Tolima, g, s* So. America	5 0 0	—		0 11 6	0 6 6	May 1874
25000	Victoria (London)*, g, Australia	1 0 0	⅜	¼ ⅜	0 12 6	0 0 7½	Jan. 1878
18000	Western Andes, s,* New Granada	5 0 0	—		0 12 0	0 12 0	July 1876
21000	W. Prussian (5500 pref. sh. 10l. pd)	10 0 0	10½	10 10½	1 10 0	0 4 0	Jan. 1879

NON-DIVIDEND FOREIGN MINES.

Shares	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
12000	Argentine, g, Argentine Republic	5 0 0	⅛	¼ ½	Fully pd
80000	Blue Tent, hyd., California	5 0 0	2¾	2½ 2¾	Fully pd.
10000	Buena Ventura,* l, Llano de las Infantas, Spain (£2 sh.)	0 5 0	—		Oct. 1878
49935	Chontales, g, s, Nicaragua*†	2 0 0	⅜	⅜ ⅝	Fully pd.
16000	Condes of Chili, s-l	5 0 0	—		Fully pd.
20000	English Australian, g, Victoria*	1 0 0	¾	⅝ ¾	Fully pd.
35000	Excelsior Hydraulic Gold Washing Co., California*	6 0 0	—		Dec. 1871
100000	Exchequer, g, s, California*†	1 0 0	4s.	2s. 4s.	Fully pd.
40000	Holcombe Valley, g,* California	1 0 0	—		Fully pd
8000	Hornachos,* s-l, Spain	10 0 0	10	9 10	Fully pd.
12000	Hultafall,* l, bl, Orebro, Sweden	5 0 0	3	2 3	Fully pd.
12000	Hunter Consolidated, s-l, Utah	10 0 0	—		Fully pd.
20000	Imperial Brazilian Collieries, Brazil*	5 0 0	—		Fully pd.
7500	Isabelle, g, s*, California (£20 shares)	5 0 0	—		Oct. 1878
100000	I. X. L., g, s, California*	1 0 0	¼	⅛ ¼	Fully pd
50000	Javali, g, Nicaragua*	2 0 0	½	½	Fully pd
3500	La Manche, l, Newfoundland	10 0 0	—		Fully pd.
12000	Lanestosa,* l, s, Viscaya, Spain (£2 shares)	1 15 0	—		Mar. 1876
75000	Malabar, g, Colombia* (67165 issued)	1 0 0	—		Full pd.
40000	Malpaso, g, Colombia* (7400 pref. shares, fully paid)	1 0 0	—		Fully pd.
12000	Menzenberg, c, Hounef, Germany*	5 5 0	—		Fully pd
4588	New Bensberg, i, l, Germany	5 0 0	—		Nov. 1876
66000	New Quebrada, c, Venezuela*	5 0 0	1½	1½ 1¾	Fully pd.
20000	New Zealand Kapanga, g, Coromandel*	5 0 0	⅝	⅜ ⅝	Fully pd.
3000	Oregon,* g, Oregon, U.S. (preference shares	4 0 0	—		Fully pd
60000	Panulcillo, c, Chili*† (£80000 debentures	4 0 0	1¼	¾ 1½	Fully pd.
80000	Pestarena United, g, Italy*†	3 0 0	4s.	2s. 4s.	Fully pd.
25000	Pitanqui,* g, Brazil (incl. 6000 sh. £1 fully paid)	0 5 0	⅜	¼ ⅜	Aug. 1878
25000	Placerville,* g q, California	2 0 0	2⅛	2⅛ 2¼	Fully pd
50000	Providencia and New Rosario, s, Mexico*	1 0 0	—		Fully pd.
40000	Ravenscliff, g, New Zealand; c, South Australia	0 5 0	¼	¼	July 1878
50000	Rica, g, Colombia* (40000 issued)	1 0 0	—		Fully pd.
£2,181,000	Rio Tinto,* c, Huelva, Spain	Stock	60	59 61	Fully pd.
100000	Rossa Grande, g, Brazil*† (£1 shares)	1 0 0	3s.	1s. 3s.	Fully pd.
30040	Russia Copper, Orenburg and Ufa*†	10 0 0	—		Fully pd
32000	Sentein,* l, Ariège, France	1 0 0	—		Fully pd.
10000	Silver Plume, s, Colorado*	1 0 0	—		Fully pd.
80000	Tecoma, s, Utah*	10 0 0	⅝	⅜ ⅝	Fully pd.
43174	United Mexican, s, Mexico*†‡	29 0 3	3	3 3½	May 1878
14000	Utah, g, s-l, Utah*	5 0 0	—		Fully pd.
50000	Virneberg, c Rheinbreitbach, Germany*	2 0 0	—		Fully pd.
15000	Yorke Peninsula, c, South Australia	1 0 0	4s.	2s. 4s.	Fully pd.
54800	Yorke Peninsula, c, South Australia Preference	1 0 0	⅛	¼ ⅛	Fully pd.

§ Have made calls since last dividend was paid.

FOREIGN AND MISCELLANEOUS STOCKS, BONDS, LOANS, AND TRUSTS.

	Closing Prices	
Argentine, 1868 6 per cent.	70	71
Bolivia, 6 per cent.	28	29
Brazilian, 1865, 5 per cent.	88	90
Chilian, 1866, 7 per cent.	80	83
City of Providence, 5 p.c. coupon bnds	100	102
Egyptian, Gov. preference	69½	70½
Do., unified debt, scrip	47	47½
Do., 7 per cent., V.M.L.	79	81
Do., 6 per cent. guar.	83	85
Do., K. Daira Sanieh	56	57
Foreign and Col. Gov. Trust, 6 p. ct.	69	73
Do., 5 per cent., 2d issue	56	61
Do., 6 per cent., 3d issue	65	70
Do., 1872, 4th issue	63	68
Do., 1873, 5th issue	60	65
Peruvian, 1870, 6 per cent.	14¼	14¾
Do., 1872, 5 per cent	12¼	12½
Russian, 5½ per cent. L. Mort.	—	
Spanish, Quicksilver, Mort., 5 p. ct.	98	100
United States Mort. 6 per cent.	102	104

NON-DIVIDEND MINES.

Shares	Mines	Paid.	Last wk.	Clos. pr
40000	Aberdaunant, l, Llanidloes*	1 0 0	⅝	½ ¾
2560	Aberllyn,* l, bl, Carnarvon	10 0 0	11	10 11
10000	Aberystwith,* s-l, Cardigan	5 0 0	—	
80	Albion, t, Cornwall	100 0 0	—	
12000	Assheton, l, Carnarvonshire*	5 0 0	⅜	¾ 1
50000	Ballycummisk,* c, Schull	2 0 0	—	
12000	Bedford Unit.,* c, Tavist. (1l. liab.)	0 1 0	⅛	⅛
12000	Bell Vean, t, c, Gwennap	2 0 0	2	1½ 2
30000	Bettws-y-Coed,* l (20,000 issued)	1 0 0	1¼	1 1¼
8000	Blaen Caelan,* l, Cardigan	3 0 0	—	
3937	Blue Hills, t, c, St. Agnes	4 6 6	⅜	⅛ ¾
20000	Bodidris,* l, bl, Denbighshire	1 0 0	1½	1⅜ 1⅝
1000	Bollihope Vale,* s-l, Durham	5 0 0	—	
200	Botallack, t, c, St. Just‡	123 15 0	25	20 25
2000	Bowden Hill,* mn	1 0 0	—	
6000	Bradwell Moss Rake	1 0 0	1	¾ 1
10000	British,* s-l, Wrexham	2 0 0	3	2 3
256	Browngelly, c, St. Neot	0 10 0	⅜	¼ ⅜
50000	Cambrian,* s-l, c, Cardiganshire	2 0 0	1½	2 2½
20000	Central Foxdale, l, I. of Man* (2l. sh.)	1 5 0	—	
10000	Central Van,* l, bl, Llanidloes	5 0 0	—	
5120	Clementina, l, Llanrwst*	1 0 0	1¼	1 1¼
7500	Combellack,* t, Wendron	2 0 0	—	
6000	Combmartin, s-l, North Devon	0 7 0	⅛	⅛
24000	Court Grange, s-l, Cardiganshire	1 0 0	1	¾ 1
15000	Cwm Brwyno,* l, Cardigan	2 0 0	2½	2 2½
15000	Cwm Dwyfor,* c, s-l, Wales	1 0 0	—	
5000	Ditto, 12½ per cent. pref.	1 0 0	—	
8000	Cwmystwith (New), Cardiganshire	5 0 0	—	
1280	D'Eresby Cons., l, bl, Carnarvon	10 0 0	8	6 8
1024	D'Eresby Mountain, l, bl, Llanrwst	20 0 0	40	30 40
2000	Denbighshire Consolidated, l*	3 0 0	1½	1 1½
12000	Derwent,* l, Durham	4 0 0	1	¾ 1
1000	Dubby Syke, l, Durham*	0 15 0	2s.	¼
6144	East Caradon, c, St. Cleer‡	2 19 0	¼	⅛ ¼
4000	East Chiverton, l, Perranzabuloe	7 7 6	1¾	1 1¼
3000	East Craven Moor*, l, Pateley Bdge	10 0 0	10	8 10
6000	East Goginan, l, Cardigan	2 0 0	—	
30000	East Roman Gravels,* l, Salop	1 0 0	—	
18000	East Van, l, Llanidloes*	5 0 0	1⅞	1⅝ 1⅞
1722	East Wh. Lovell, t, Helston	9 16 0	⅛	¼ ⅛
20000	Elgar,* s-l, Cardiganshire	1 0 0	—	
12000	Frongoch, l, Cardigan (11000 issued).	2 0 0	2½	2¼ 2¾
10000	Frosterley,* l, Durham	1 0 0	2	1½ 2
3950	Gawton, c, Tavistock	4 5 6	⅜	⅛ ⅜
12000	Glan Clwyd,* l, Gwyddelwern	1 0 0	—	
14000	Glenroy,* s-l, Isle of Man	4 5 0	⅝	⅜ ⅝
10000	Glyn,* l, Llanidloes	2 0 0	⅜	½ ⅜
12000	Goginan, & Level Newydd, Card., l	2 10 0	—	
20000	Goreu,* s-l, Carmarthen	1 0 0	1	¾ 1
20000	Gt. E. Foxdale, l, I. of Man (1l. sh)	0 18 0	—	
12000	Great Holway,* l, Flintshire	5 0 0	5	4½ 5
9500	Great Pant-y-Pydew, l, Holywell	2 0 0	—	
6000	Gt. Wheal Eleanor, t, North Bovey.	1 17 6	⅜	¼ ⅜
6000	Great Wheal Rodd,* s-l, Cornwall	0 10 0	1	¾ 1
10000	Harehope Gill,* l, Durham (£1 sh.).	0 5 0	—	
600	Hartington Moor,* carb. l, Derby	1 0 0	2	1½ 2
6400	Harwood,* l, Durham	0 15 0	½	⅛
3000	Herodsfoot, l, near Liskeard†	1 0 0	4	3 4
6000	Hingston Down, c, Calstock*†	0 6 0	¼	⅛ ¼
5000	Hush Eisteddfod Minera,* l	2 0 0	—	
2500	Killaloe, sl, Tipperary‡	1 0 0	—	
6000	Killifreth, t, Chacewater	2 12 6	1⅝	1½ 1⅝
25000	Kingston Con., s-l, Stoke Climsland.	1 0 0	—	
	Ditto, preference	1 0 0	1½	1 1½
12000	Ladywell,* l, Salop	2 10 0	1	¾ 1
12000	Ditto, 10 per cent. pref., 1l. each	0 10 0	¾	½ ¾
5000	Lead Era,* l, Mold	2 10 0	3½	2¾ 3¼
2500	Levant, c, t, St. Just	10 14 6	—	
1400	Lisburne Syndicate,* l, Card.	20 0 0	18	16 18
6000	Livingstone Consols, t, St. Agnes	0 10 0	1	¾ 1
10000	Lomax, s-l, Perranzabuloe	1 0 0	1¼	1 1¼
5120	Lovell, t, Wendron	0 16 0	2	1½ 2
25000	Llanrhaiadr, l, Montgomery*	2 0 0	—	
30000	Llanrwst,* l, Carnarvon	2 0 0	2½	1 2
24	Mawston,* l, South Wales	50 0 0	2	1½ 2
6000	Medlyn Moor, t, Wendron	2 9 10	—	
11000	Melyndwr, l, Cardigan*	8 0 0	1¼	¾ 1¼
7000	Mid Devon Copper*	0 6 8	1¼	1 1¼
21000	Ditto	0 2 6	1	¾ 1
8000	Mineral Corp. of Great Britain*	10 0 0	11	10 11
11000	Monydd Gorddu, l, Cardigan* (Red.)	5 0 0	2¾	2¼ 2¾
12000	Morfa Du, z, g, s, Anglesea	1 0 0	1½	⅞ 1⅛
25000	Nant-y-Ronen, s-l, Cardigan*	1 0 0	—	
15000	Nascent Copper*	1 0 0	—	
4768	New Bronfloyd,* l, Cardigan (5l. sh.)	3 16 0	3	2½ 3
8000	New Dolcoath, t, c, Camborne*	3 0 0	1¼	1⅛ 1¼
20000	New East Foxdale, s-l, Isle of Man.	0 15 0	—	
1492	New Hendra, t, Breage	3 9 0	—	
3500	New Tincroft,* t, Lelant	6 0 0	3	2½ 3
4000	North Cornwall,* l, Cornwall	5 0 0	4	5
30000	North Laxey,* Isle of Man	1 0 0	4s.	2s. 4s.
2000	North Levant, t, c, St. Just‡	12 16 0	1	¾ 1
50000	North Molton, c, mn, i, Devon	1 0 0	1	1
20000	North Prince Patrick,* l, Holywell.	1 0 0	—	
5936	North Treskerby, c, St. Agnes	8 17 10	—	
6400	Oola Hills,* s-l, Limerick	5 0 0	—	
12000	Pandora,* l, Carnarvon	2 0 0	⅝	⅜ ⅝
6000	Park Valley,* s-l, North Devon	0 4 0	¼	⅛ ¼
6000	Parracombe, s l, Devon	0 5 0	⅛	⅛
16923	Parys Mountain,* c, Anglesea	3 0 0	11s.	9s. 11s.
12000	Phœnix, & W. Phœnix, t, c, Link. §	5 10 3	—	
4000	Pateley Bridge, l, Yorkshire	5 0 0	1	¾ 1
7000	Picton,* s-l, Holywell, fully paid	1 0 0	5	4½ 5
12000	Plynlimmon, l, Llanidloes*	2 0 0	6s.	4s. 6s.
10000	Port Nigel,* s-l, Carnarvonshire	2 0 0	½	¼ ½
2000	Prideaux Wood, t, Llanivery	5 0 0	—	
5182	Prince of Wales, c, Calstock‡	2 8 0	6d.	6d.
6000	Relistian Consols, c, Gwinear	0 10 0	¼	⅛ ¼
5000	Rhydalun,* l, Mold	10 0 0	44	10 11
15000	Rookhope, l, Durham*	1 10 0	¼	⅛ ¼
4200	Snowbrook, s-l, Montgomery	5 0 0	—	
[illegible]	So. Cwmystwith, l, Cardiganshire	2 0 0	3	2 3
6000	South Darren, l, Cardigan*	1 10 0	1¾	1⅝ 1¾
30000	South de Eresby Mountain,	1 0 0	1½	1¼ 1½
6000	So. Devon United Copper*	1 0 0	1	¾ 1
512	South Dolcoath, c, t, Redruth	12 5 0	—	
5000	So. Molton Cons., s-l, No. Devon	0 3 6	—	
18000	South Roman Gravels, l*	1 10 0	—	
6000	South Roskear, t, c, Camborne	8 5 0	—	
6000	South Tolcarne, t, c, Camborne	2 5 6	¼	⅛ ¼
937	South Wheal Crofty, c, Illogan	45 10 10	7½	7 7½
12000	Steddfa,* l, Cardigan	1 0 0	1¼	1 1¼
6000	St. Lawrence, Amal., l, Flintshire*	2 0 0	—	
10000	St. Patrick, l, Halkin, Holywell*	1 0 0	1¼	1 1¼
6000	Success, &c., l, Derb. (12,000l. called)	1 0 0	—	
18000	Sunnyside,* l, Durham	2 0 0	—	
30000	Talybont,* s-l, Cardiganshire	1 0 0	—	
40000	Tamar, s-l, Bearalston*	1 0 0	1½	1 1½
6400	Teesdale,* l, Durham	1 0 0	6s.	¾
14000	Teign Valley, l, bar., Bridford	1 0 0	—	
10000	Temple, l, Cardigan*	1 0 0	—	
10000	Tolgus Consols,* c, Redruth	5 0 0	3½	3 3½
5000	Treleigh Wood, t, Redruth	6 1 0	—	
12000	Trethellan, s-l, Crantock*	2 0 0	—	
640	Truro*, l, Nerquis, Flintshire	10 0 0	—	
5000	Tyn-y-Fron,* l, Cardigan	1 0 0	1½	1 1½
5000	Ditto	0 5 0	⅜	⅜ ½
1000	Vaughan*, l., Cardiganshire	10 0 0	—	
18000	Victor,* l, Flintshire (£1 share)	0 5 0	—	
12000	West Assheton, l, Carnarvon	1 0 0	⅞	¾ 1
6000	West Basset, c, Illogan†‡	6 13 4	4½	3½ 4½
5500	West Combmartin, s-l, North Devon	1 0 0	—	
7000	Ditto	0 2 6	—	
3000	W. Craven Moor, l, Pateley Bridge*.	10 0 0	9	7 9
5000	West Godolphin, t, c, Breage	2 18 0	1	¾ 1
12000	West Goginan,* Cardiganshire	2 0 0	⅜	⅛ ⅜
10000	West Llangynog, s-l, Montgomery	2 0 0	—	
3000	West Mary Ann, l, Menheniot	0 12 6	¾	½ ¾
50000	West Milwr, s-l, Flint	1 0 0	—	
20000	W. of Englnd. Spat. Iron & Ld. Smelt.	5 0 0	—	5
20000	West Pateley Bridge,* l, Yorkshire.	1 0 0	—	2 2¼
1000	West Roskear, t, s-l, bl, c, Camborne.	5 10 0	—	
10000	West Vor,* t, c, ars, Breage	1 0 0	—	
3000	West Wheal Peevor, t, Redruth	0 10 0	3	2¼ 3
6000	Wheal Agar, c, Illogan	12 10 0	4½	3¾ 4
512	Wheal Basset, c, Illogan‡	33 2 6	10	7½ 10
6000	Wheal Coates, t, St. Agnes	2 0 0	—	
2635	Wheal Comfort, c, Gwennap	1 7 0	—	
6000	Wheal Crebor, c, Tavistock	4 6 0	¼	⅛ ¼
5179	Wheal Grenville, c, Camborne	4 4 0	2½	1½ 2
12000	Wheal Russell, c, Tavistock	2 1 6	—	
1000	Wheal Sisters, t, Lelant	14 0 0	9	8½ 9
4096	Wheal Uny, t, c, Redruth	14 8 6	½	⅜ ½
2324	White Cliff,* l, Llanrwst	5 0 0	—	
5000	Wicklow, c, sul, i, Wicklow	2 10 0	—	

b, blende; cl, coal; c, copper; g, gold; l, lead; s, silver; sl, slate; s-l, silver-lead; t, tin; z, zinc.

* Limited Liability Companies; † quoted on the Stock Exchange; ‡ have paid dividends.

IRON AND COAL COMPANIES.

Shares.	Company.	Paid.	Prices.	
£100	Abbot, John, and Co. [L.]	£75 0 0	35	30
15	Albion Steel and Wire Co. [L.]	14 0 0		—
5	Alltami Colliery Co. [L.]	5 0 0	3	3½
100	Ashbury Co. [L.]	90 0 0	60	55
3	Bagnall, John, and Sons [L.]	3 0 0	⅝	⅞
10	Benhar Coal Co. [L.]	10 0 0	¼	¾
50	Bilbao Iron Ore Co. [L.]	50 0 0	18	20
10	Bilson & Crump Meadow Coll. Co. [L.]	10 0 0	2	2½
4	Blaen Cwmbach Coal Co. [L.]	4 0 0		—
50	Blaenavon Iron and Steel Co. [L.]	50 0 0		—
100	Bolckow, Vaughan, and Co. [L.]...A	50 0 0	½ dis	½ pm
50	Bowling Iron Co. [L.]	50 0 0		—
50	Britannia Ironworks [L.]	25 0 0		—
50	Brown, Bailey, and Dixon [L.]	40 0 0	10	9
100	Brown, John, and Co. [L.]	70 0 0	24	22
3	Cakemore, Causeway Green, L. Holt	3 0 0	3½	3¾
100	Cammell and Co. [L.]	80 0 0	17	16
20	Cannock and Huntington Coal [L.]	10 0 0	9	8½
10	Cardiff & Swansea St. Coal Co. [L.]	9 0 0	¾	1
10	Cardigan Steel and Wire Co. [L.]	8 10 0		—
10	Central Swedish Iron and Steel [L.]	10 0 0	1	2
5	Chapel House Colliery	5 0 0	2¼	2¾
50	Charlton Iron Co. [L.]	50 0 0	8	10
50	Chatterley Iron Co. [L.]	45 0 0	41	39
10	Chillington Iron Co. [L.]	10 0 0	1¼	2¼
10	Consett Iron Co. [L.]	7 10 0	8½	9
1	Consett Spanish Ore [L.]	1 0 0	¼	⅛
50	Cooke, William, and Co. [L.]	45 0 0	45	43
30	Darlington Iron Co. [L.]	12 10 0	⅛	⅛
50	Davy Brothers [L.]	22 10 0	⅛	¾
5	Diamond Fuel Co. [L.]	5 0 0		—
23	Ebbw Vale Co. [L.]	20 0 0	18	16
100	Fox, Samuel, and Co. [L.]	80 0 0	25	30
10	General Mining Ass. [L.] (£1 returned)	9 0 0	2½	3½
20	Great Western Coal Co. [L.]	17 0 0		—
2	Gwyngwillim Colliery Co. [L.]	2 0 0		—
15	Hopkins, Gilkes, and Co. [L.]	12 0 0	11½	11
50	Knowles, Andrew, and Sons [L.]	17 0 0	10	9
10	Llay Hall Coal, Iron, & Firebrick [L.]	10 0 0	5	4
5	Littledean Woodside Coll. Co. [L.]	5 0 0		—
50	Llynvi, Ogmore, & Tondu Co. [L.]	50 0 0	5	5½
10	Lydney and Wigpool Iron Ore [L.]	8 5 0	11	10
10	Marbella Iron Ore Co. [L.]	10 0 0	9½	9
6	Mersey Steel and Iron Co. [L.]	5 0 0		—
10	Midland Iron Co. [L.]	5 0 0	1½	1
5	Mold Argoed Colliery Co. [L.]	5 0 0	4	3¼
10	Monkland Iron and Coal Co. [L.]	10 0 0	9½	9¼
4	Mwyndy Iron Ore [L.]	3 15 0	2¾	2¼
100	Nant-y-Glo and Blaina (8 p.c. pref.)	100 0 0	18	20
3	Nerbudda Coal and Iron [L. & Red.]	2 0 0	1	1¼
20	New Sharlston Collieries [L.] Pref.	20 0 0	17	16
10	Newport Abercarn Coal Co. [L.]	10 0 0	4	4½
10	Northmptn. Coal, Iron & Wagon [L.]	8 0 0		—
10	Northfield Iron Co. [L.]	8 10 0	8¼	7½
1	Norton Green Coal Co. [L.]	1 0 0		—
35	Palmer's Shipbuilding and Iron [L.]	25 0 0	15	14
100	Parkgate Iron Co. [L.]	65 0 0	23	21
20	Patent Nut and Bolt Co. [L.]	14 0 0	5½	6
20	Patent Shaft and Axletree [L.]	10 0 0	1	¾
20	Pelsall Coal and Iron [L.]	17 10 0	11	10
50	Phœnix Bessemer Co. [L.]	40 0 0		—
50	Rhymney Iron Co. [L.]	50 0 0	16¼	17½
10	Sandwell Park Colliery Co. [L.]	10 0 0	13¼	14½
10	Ditto New	5 0 0	2	2½ pm
100	Shotts Iron Co. [L.]	100 0 0	65	70
100	Sheepbridge Iron and Coal [L.]	70 0 0	47½	45
50	Silkstone & Dodworth Cl. & Iron [L.]	33 0 0	28	27
20	Skerne Ironworks [L.]	20 0 0	16	15½
50	Somorrostro Iron Co. [L.]	50 0 0		—
25	South Wales Coal Co. [L.]	21 0 0	8½	4½
100	Staveley Iron and Coal Co. [L.]	60 0 0	7	5
100	Ditto ditto New	10 0 0	½	¾
10	Swansea Valley Steam Coll. Co. [L.]	6 0 0		
100	Thames Iron Company	100 0 0		—
50	Tredegar Iron and Coal Co. [L.]	20 0 0	13	11
25	Ditto B. shares	25 0 0	16	18
20	Ulverston Mining Co. [L.]	14 0 0	7	5
10	Vancouver Coal [L.]	6 0 0	3½	2½
100	Vickers, Sons, & Co. [L.]	100 0 0	1	2
50	Welsh Ironworks Co. [L.]	50 0 0		—
25	W. Cumberland I. and Steel [L.]	20 0 0	15	13
10	West Mostyn Coal [L.] (12 p.c. pref.)	5 0 0		—
5	West Swansea Colliery Co. [L.]	5 0 0		—
10	Whitehaven Iron Co. [L.]	10 0 0		—
100	Wigan and Whiston Coal Co. [L.]	70 0 0		—
100	Wigan Coal and Iron Co. [L.]	75 0 0		—

WAGON COMPANIES.

10	Birmingham Wagon Co. [L.]	10 0 0	13½	13¼
10	Ditto, 2nd issue	4 0 0	2	2¼
10	Ditto, pref., 6 per cent.	10 0 0	11	11¼
20	British Wagon Co. [L.]	10 0 0	1½	1⅝
10	Gloucester [L.]	10 0 0	6	6½
10	Ditto, 5th issue	5 0 0	2½	2
10	Met. Rail. Car. and Wagon Co. [L.]	5 0 0	2	2¼
5	Ditto, pref., 6 per cent.	2 0 0	½	¼
10	Midland	10 0 0	¼ dis	¼
20	North Central Wagon Co.	20 0 0	19	20
5	Rail. Car. [L.] (Oldbury)	5 0 0	1	1½
5	Ditto, pref., 6 per cent.	5 0 0	½	¾
20	Sheffield Wagon Co. [L.]	15 0 0	1	1½
10	Yorkshire Wagon Co. [L.]	10 0 0	1	1¼

TELEGRAPH COMPANIES.

"St."	Anglo-American	100 0 0	58¼	58¾
10	Brazilian Submarine	10 0 0	6¾	7
20	Direct United States Cable	20 0 0	11¼	11¾
10	Eastern	10 0 0	7⅜	7⅝
10	East. Exten., Australia and China	10 0 0	7¼	7½
10	Great Northern	10 0 0	8⅛	8⅜
25	Indo-European	25 0 0	20	21
10	Mediterranean Extension	10 0 0	2¼	3¼
8	Reuters	8 0 0	9½	10½
Stk.	Submarine	100 0 0	215	225
10	West India and Panama	10 0 0	1⅞	2⅛
20	Western and Brazilian	20 0 0	4	4¼
$1000	Western Union, 7 per cent. Mort. Bonds	$1000	114	118

MISCELLANEOUS.

Stk.	Atlantic and Great Western Leased Lines, Rental Trust	100 0 0	53	55
25	Australian Agricultural	21 10 0	85	87
25	Austral. Mort. Land and Finance [L.]	5 0 0	5¾	6¼
10	Avonside Engine [L.]	7 0 0	8	7
Stk.	Baltimore and Ohio, 6 per cent.	100 0 0	109	111
10	Brighton Aquarium [L.]	10 0 0	7	8
Stk.	Cent. of New Jersey Con. Mort.	100 0 0	85	87
Stk.	Cent. Pacific of Calif., 1st Mort. 6 p.c.	100 0 0	110½	111½
25	City of London Real Property [L.]	12 0 0	1¾	2¼
5	Diamond Rock Boring	4 10 0	3¾	3¼
15	English and Foreign Credit	8 0 0		—
16	Fore Street Warehouse [L.]	14 0 0	6½	7½
15	Foster, Porter, and Co. [L.]	10 10 0	17½	18½
5	Gen. Phos. & Chem. Works Co. [L.]	5 0 0		—
1	Greenhill [L.]	1 0 0		—
5	Kit Hill Tunnel [L.]	1 0 0		—
17	Hudson's Bay Company	17 0 0	13¾	14
10	Huntington Copper and Sul. Co.	9 0 0		—
Stk.	Illinois Central, $100 shares	100 0 0	83	84
Stk.	Illinois & St. Louis Bridge, 1st Mort.	100 0 0	90	93
Stk.	Ditto, 2nd Mort., 7 per cent.	100 0 0	40	45
Stk.	Illinois Cent. Sinking Fund, 5 p. cent.	100 0 0	103	105
Stk.	Ditto, 6 per cent.	100 0 0	113	115
7½	Imperial Credit [L.]	7 10 0	7⅛	7⅜
—	Ditto, Surplus Certificate	—	6⅜	6⅝
Stk.	Lehigh Val. Con. Mort., A, 6 p. cent.	100 0 0	102	104
10	Milner's Safe [L.]	10 0 0	7	8
25	National Discount [L.]	5 0 0	8½	9
Stk.	N. Cent. Rail. Con. Mort., 6 per cent.	10 0 0	88	90
10	Pawson and Co. [L.]	8 0 0	¼ dis	¼ pm
50	Peninsular and Oriental Steam	50 0 0	41	43
Stk.	Pennsyl. Gen. Mort. 6 p. cent., 1880.	100 0 0	111	112
Stk.	Ditto, Con. Sink. Fund, 6 p. ct., 1905	100 0 0	102½	103½
Stk.	Scottish Aust. Investment Company.	100 0 0	195	205
Stk.	Ditto, 6 per cent. Preference	100 0 0	124	129
20	Suez Canal shares	20 0 0		—
12	Telegraph Construc. & Mainte. [L.]	12 0 0	32	32½
5	Ditto, Second Bonus Three per Cents	5 0 0	2⅛	2⅞
10	Tharsis Sulphur and Copper Co.	10 0 0	21	22
Stk.	Union Pacific Land Grant, 1st Mort.	100 0 0	114	116
Stk.	Union Pacific Railway, 1st Mort.	100 0 0	110	112
5	West of England Compressed Peat	5 0 0		—
5	Ditto	2 0 0		—

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